Book of Abstracts

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A Clinical and Cost Analysis of Medication Reconciliation by Pharmacists at Discharge

Poster - Abstract ID: 70

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Abstract

Introduction:

The transition between primary and secondary care is one of the most common points of medication errors (1). There is currently a lack of comprehensive data on the prevalence and severity of medication errors occurring at the point of discharge and the impact a pharmacist can have on these errors in terms of patient safety and healthcare expenses.

Aims:

The aim of this study is to assess the impact of a pharmacist discharge service within the Acute Medical Admission Unit (AMAU). This will be achieved by (i) quantifying and categorizing the unintentional medication variances, (ii) assessing the potential patient safety benefits using a validated tool and (iii) estimating the cost of providing a pharmacist discharge service and the cost avoided.

Methods:

Over a twelve week period, medication reconciliation at discharge was conducted by the clinical pharmacist for patients once their discharge was completed from the AMAU. A seven member peer review panel reviewed the interventions using a Visual Analogue Scale (VAS) (2) validated severity tool to assess the potential patient harm and the potential for readmission. Cost avoidance was then calculated per intervention by linking VAS scores to a monetary value (3).

Results:

Seventy one patient discharges with 146 interventions were reviewed. 83.1% of discharges required an accepted pharmacist intervention. 72.6 % of interventions related to "prescription errors" and 27.4% related to "communication errors".

The majority of interventions, 71.3%, were considered as potential to cause moderate patient harm. 2.1% of interventions were considered as potential for severe harm.

The potential to prevent readmission was moderately likely in 48% of interventions.

The estimated total cost avoidance was €107.45 per intervention with a cost:benefit ratio of €1:€59.50 .

Conclusion:

A pharmacist discharge service was shown to have a positive effect in terms of patient safety and cost avoidance to the hospital.

References

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3. Karnon J, Campbell F, Czoski□Murray C. Model□based cost□effectiveness analysis of interventions aimed at preventing medication error at hospital admission (medicines reconciliation). Journal of evaluation in clinical practice. 2009;15(2):299-306.

A clinical pharmacist's interventions in surgical patients in St. James's Hospital: a clinical and cost analysis

Poster - Abstract ID: 92

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Abstract

Background

The role of the clinical pharmacist in the care of surgical patients has been largely under-studied, both nationally and internationally. Surgical patients experience 2□0–27□7 adverse drug events per 100 admissions, of which 15□4–53□6 percent are preventable. Limited studies have been conducted in the Irish setting.

Aim

To ascertain the frequency and type of interventions made by a surgical pharmacist in a large teaching hospital in order to provide a quantitative value to this role.

Methods

Design: Observational study of a single clinical pharmacist's interventions. All interventions made over a time period were recorded.

Identify and classify interventions: Medicines involved were categorised by Anatomical Chemical Therapeutic (ATC) classification and medication error type.

Peer review: Interventions were reviewed by a panel of five independent experienced healthcare professionals with assignment of risk ratings using the Dean and Barber Visual Analogue Scale (VAS).

Assignment of monetary values: Costs potentially avoided were calculated by linking peer review results to values from a previously designed economic model by Campbell.

Results

163 interventions were analysed for 87 patients with an acceptance rate of 97.6%. 1.23% of interventions were classified as minor (<3) with no patient harm anticipated. The majority, 97.54% were classified as moderate to serious (3-7) with the potential to cause patient harm and cause increased length of hospital stay. 1.23% of interventions were classified as having the potential to cause severe harm (8-10). A cost benefit ratio of 10.6:1 was calculated, meaning €10.6 avoided for every €1 invested.The most common medication classes were analgesics, antithrombotics and drugs for acid disorders.

Conclusion

This study details the frequency and types of interventions made by surgical pharmacists. With peer-review of all interventions along with assignment of monetary values to the costs avoided, the study provides a robust evidence base for the value of the surgical pharmacist.

References

1.Dean B, Schachter M, Vincent C, Barber N. Prescribing errors in hospital inpatients: their incidence and clinical significance. Qual Saf Health Care. 2002;11(4):340-4.

2.Campbell F, Karnon J, Czoski-Murray C, Jones R. A systematic review of the effectiveness and cost effectiveness of interventions aimed at preventing medication error (medicines reconciliation) at hospital. J Eval Clin

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A quality improvement approach to achieve cost saving in transplant prescribing.

Poster - Abstract ID: 52

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Abstract

Introduction
As the national lung transplant programme has expanded, opportunities for cost saving have emerged. Two high expenditure areas identified were: duration of antifungal prophylaxis and use of cytomegalovirus specific immunoglobulin (CMVIVIG) to provide passive immunity to patients at high risk of CMV primary infection.

Aim/ Objective
To implement two cost savings measures in the lung transplant population without compromising patient outcomes

- Shortening duration of anti-fungal prophylaxis with IV echinocandin to the agreed protocol of 7 days for all patients
- Changing completely from CMVIVIG to an appropriate dose of IVIG.

Methodology
A problem statement was developed.

Stakeholder involvement and agreement was gained at a multidisciplinary meeting in November 2015.
A new CMV prophylaxis protocol was developed, agreed and uploaded onto the hospital intranet.
Multiple sources of influence were used to ensure that the changes were implemented; monthly run charts emailed to the consultants and finance department showing progress, peer pressure, drug chart reminders of course duration, demanding accountability for deviations.
Results
Changing from CMVIVIG to IVIG was implemented easily and resulted in a cost saving of €66,000 in twelve months. No patients were admitted with primary CMV infections following this change.

The number of “beyond protocol” doses of prophylactic echinocandin dropped from a mean of 4 to a mean of 0.5 per patient. At current transplant activity this equates to a saving of €60,000 in twelve months. There is no evidence of increase in fungal infections in this group.
Statistical process control identified that the reliability of stopping antifungal prophylaxis at the agreed time is sensitive to periods of annual leave of senior decision makers.
Conclusion

Implementing this change was resource intensive for the pharmacy department. Quality improvement methodologies were successfully implemented to achieve savings; they have also revealed weaknesses in the system which can addressed to further improve compliance

An Audit to Assess Compliance to H-PIC/S National Guidelines for Aseptic Compounding in an Irish Hospital Pharmacy.

Poster - Abstract ID: 50

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Abstract

Introduction:
A full audit cycle of H-PIC/s guidelines was conducted in the aseptic compounding (ACU) unit at St. Vincent's Private Hospital (SVPH) in order to determine baseline compliance, with re-audit performed on the intervention group.
Aims:

1. To determine current adherence to H-PIC/S guidelines in the ACU at SVPH.
2. To identify areas of low and non-conformance and to grade them for corrective and preventative actions (CAPA).
3. To re-audit post CAPA and perform statistical analysis on the "before and after" results.

Methods:
An audit tool was designed and a total of 414 questions corresponding to the 149 standards deemed applicable to the ACU practices at SVPH were answered. CAPA was performed on all but three areas of non-compliance as identified in baseline data of Chapter 2: Personnel.
The primary outcome measure was the number or percentage of questions achieving Yes, No and Partial responses to questions in the baseline audit (control group) and subsequently the re-audit of Chapter 2: Personnel (intervention group). Secondary outcomes were the significance of non-conformities as determined following the application of a grading system.
Results: Baseline data showed 78% compliance across chapter 2-9 of H-PIC/S on first assessment. Chapter 2: Personnel (Control Group) presented 52% compliance rate. There were 21 non-conformities identified in this chapter with interventions performed on 18 of these. Re-audit of Chapter 2: Personnel (Intervention Group) resulted in 91% compliance and this resulted in a significant difference between the control and intervention groups ($p<0.05$ Chi-Square test).
Conclusions: This study was successful in completing the first full assessment of compliance to H-PIC/S national guidelines in an Irish hospital pharmacy. Areas of non-conformance were highlighted and the implementation of CAPA in the targeted chapter was deemed to have a positive and significant impact on compliance.

An Equivalence Study between Antibacterial Ophthalmic Drops prepared on a Pharmacy Bench versus Laminar Airflow Hood

Poster - Abstract ID: 78

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Abstract

Introduction

The MMUH prepares ophthalmic drops in a laminar airflow hood in the Pharmacy Department for in-patients. On discharge patients bring prescriptions to their community pharmacists who prepare the same drops on the pharmacy bench.

An equivalence study was undertaken on the sterility of antibacterial eye drops compounded on the pharmacy bench versus in a Cleansphere® Class A 100 laminar airflow isolator in the MMUH Pharmacy Department over a ten-week period, from May to July 2016.

Aim/Objective

To compare the sterility of antibacterial eye drops Vancomycin 5% w/v and Fortified Gentamicin 1.36% w/v compounded on the pharmacy bench and in a laminar airflow hood in a hospital pharmacy department.

Methodology

- Ophthalmic drops Vancomycin 5% w/v and Fortified Gentamicin 1.36% w/v were prepared fortnightly on both the pharmacy bench and laminar airflow isolator.
- Aliquots of 1 mL of both ophthalmic drops were cultured in Tryptone Soya Broth 15 mL and Fluid Thioglycollate Broth 15 mL.
- Samples and controls were incubated at 30ºC in a VWR INCU-Line incubator for 14 days.
- Growth was monitored at day 0,1,2,5,6,7,8,9,12,13,14 as determined by visual turbidity of samples compared to inoculated controls.[1]

Results

At day 14, all 20 samples tested, their duplicates and controls, and the original Vancomycin 5% w/v ophthalmic drops (transferred at day 7 (expiry date)) prepared on the pharmacy bench and in a laminar airflow hood showed no growth within the expiry date in the Thioglycollate or Tryptone Soya broths.

Conclusion

For the purposes of the MMUH, there was no growth found with either methodology. Therefore, these drops are considered safe for use in treating our patients' ophthalmic conditions.

References

1. Council of Europe. European Pharmacopoeia, 8th Edition [Internet]. Strasbourg: Council of Europe [cited 2016 Aug 13]. Available from URL: http://www.edqm.eu/en/european-pharmacopoeia-8th-edition-1563.html.

An evaluation of current practice for the treatment of delirium in the intensive care unit of Cork University Hospital and the implementation of new guidelines.

Poster - Abstract ID: 135

Ms. Denise Leamy [1]

1. *cork university hospital*

Abstract

Introduction:
The management of delirium is an important and challenging facet of therapy when dealing with patients in a critical care unit. It has a reported prevalence of up to 80%. Delirium is consistently associated with many negative outcomes such as increased length of stay, decreased survival and increased cognitive dysfunction.
Method:
This study was broken up into four parts. The first part was carried out over a three-month period (March to May 2016) to evaluate the current practice for the treatment of delirium in the Intensive Care Unit (ICU) at Cork University Hospital (CUH). Part two involved surveying all critical care pharmacists in Ireland to determine what current practice was in other Irish hospitals. An ICU delirium diagnosis and treatment guideline was then produced in conjunction with the psychiatry team as part 3. Part 4 will result in the integration of the Confusion Assessment Method Intensive Care Unit (CAM-ICU) tool onto the electronic prescribing system to aid nursing staff in their assessment.
Results:
Of the 144 patients admitted to ICU over the three-month study period 27 (19%) were treated for delirium using an antipsychotic. None of the diagnostic tools such as CAM-ICU were used in the diagnosis of delirium. The most common drug of choice was haloperidol, with olanzapine as the second agent.
Responses were received from 38% of pharmacists in other Irish hospitals. It was evident that treatment practice differs between hospitals. Only 67% of hospitals were using a diagnostic tool to assess for delirium and no hospital had a guideline in place with treatment recommendations. This is mainly due to the lack of clear international guidelines on the pharmacological treatment of delirium.
Conclusion:
The use of the new delirium diagnosis and treatment guideline should aid in standardising practice in the ICU of CUH.

An investigation of cancer patients and healthcare professionals' use of, and views on complementary and alternative medicine (CAM).

Poster - Abstract ID: 51

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Abstract

Introduction

The use of CAM amongst cancer patients has risen in popularity, with patients seeking methods outside conventional medicine in the pursuit of cure or symptom management. Given this, concerns surrounding the effectiveness and safety in this population have increased.

Aim/Objective

To investigate the views and use of CAM by oncology patients and healthcare professionals (HCPs), and to ascertain the HCPs knowledge of CAM and the influence that a training intervention may have on their perceived attitude and knowledge.

Methodology

A self-administered questionnaire-based survey was offered to oncology patients attending the day oncology ward. A separate self-administered pre- and post-intervention questionnaire-based survey was administered to oncology HCPs.

Results

Prevalence of CAM use amongst patients was 20%. Gender had no impact on CAM use. CAM use was more common in the 31-40 year age group, in patients with higher levels of education and in those with brain cancer. These variables were not independent predictive factors of CAM use. The average monthly spend on CAM was €93. Acupuncture, herbal medicines, faith healing, meditation and reflexology were the five most popular CAM used. The majority of HCPs (86.67%) had used CAM in the past. A positive attitude towards CAM was demonstrated pre-intervention, however this shifted to a more negative attitude post-intervention. HCPs reported 36.67% routinely ask patients about their CAM use however only 5% of patients reported being asked. Most HCPs thought they did not have adequate knowledge on the safety (73.33%), efficacy (73.33%) and evidence base (86.67%) of CAM.

Conclusion

The prevalence of CAM use among oncology patients was surprisingly lower than expected. HCPs are eager to learn more about CAM and believe they should be in a position to advise, therefore further routine training interventions are required to raise awareness of the risks and benefits of these therapies.

References

1. Molassiotis, A., Fernadez-Ortega, P., Pud, D., Ozden, G., Scott, J.A., Panteli, V., Margulies, A., Browall, M., Magri, M., Selvekerova, S., Madsen, E., Milovics, L., Bruyns, I., Gudmundsdottir, G., Hummerston, S., Ahmad, A.M., Platin, N., Kearney, N., and Patiraki, E. (2005) 'Use of complementary and alternative medicine in cancer patients: a European survey', *Annals of Oncology*,16(4), pp. 655–663.

Analysis of the safety and tolerabiltiy profile of Hepatitis C direct acting antivirals in a real world population

Poster - Abstract ID: 93

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Abstract

Introduction

The availability of interferon free Hepatitis C (HCV) treatment regimens has changed the treatment pathway for patients and healthcare professionals. Clinical trials have identified minimal adverse events (AEs) associated with direct acting anti-virals (DAAs). However real world data assessing the safety and tolerability of DAAs is lacking.

Aims

1. To identify, quantify, describe and categorise the AEs reported in a cohort of HCV patients treated with interferon-free regimens.
2. To assess if any patient factors are associated with a higher occurrence of AEs.

Method

A randomly selected sample, comprising 20% of the total HCV treatment population at St. James's Hospital, were included in this retrospective analysis. AE reports were collated from medical records. AEs were classified into six descriptive categories based on the level of intervention required. Data analysis was completed using Excel® and SPSS®.

Results

A total of 72 patients were included in this review, of which 79% were male. Ribavirin was co-prescribed in 89% of patients. AEs were reported by 94.4% of the cohort with a mean of 10 (± 6.5) per patient. Analysis identified 18 AEs with a prevalence of at least 10%. The regimen of paritaprevir/ritonavir/ombitasvir/dasabuvir was associated with a greater number of AEs per patient than the average for the total cohort. The difference in the mean number of AEs reported between the HIV co-infected and mono-infected subgroups was found to be significant ($p < 0.001$). Increased monitoring visits and investigations accounted for 65.4% of the total AE interventions made. All patients within the study group completed their treatment course.

Conclusion

The findings of this retrospective analysis suggest that there is a smaller range of prevalent AEs with DAA therapy relative to previous interferon based therapies. Further investigation into AEs associated with DAAs is needed once ribavirin-free therapy becomes established.

References

References available on request.

Annual Antimicrobial Point Prevalence Survey of Hospital Prescriptions in Ireland 2016

Poster - Abstract ID: 57

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Abstract

Introduction

Antimicrobial Point Prevalence Surveys (PPSs) provide information on antimicrobial prescribing practices at a particular point in time.

Aim

To collate and analyse systemic antimicrobial prescribing data.

Methods

The PPS was carried out in September and October 2016 via a nationally agreed protocol and data entry form. Data were then analysed by the Health Protection Surveillance Centre and reported to participating hospitals.

Results

Overall, 41 hospitals participated. The median prevalence of antimicrobial use was 37.8%. Co-amoxiclav and piperacillin/tazobactam constituted 35.2% of all antimicrobial agents prescribed.

The majority of indications for antimicrobial use were community-acquired. Twenty-three percent of antimicrobials were prescribed for health-care associated indications, of which 23% were acquired post-operatively. Antimicrobials prescribed for surgical prophylaxis accounted for 8% of all prescriptions. Of these, 66% extended beyond a single dose.

The most common anatomical site of infection being treated was respiratory, followed by intra-abdominal and skin/soft tissue. Overall, 74.9% of antimicrobials were compliant with the local antimicrobial guidelines or microbiologist/infectious diseases physician advice specific to combined: antimicrobial choice; duration; dose; and formulation. The indication for antimicrobial use was documented for 88.3% of antimicrobial prescriptions, 32.7% had a stop/review date documented, 15.2% of therapies were pathogen directed, 20.5% of cases were discussed with a microbiologist/ID physician and 82.4% of therapies that extended beyond seven days were deemed appropriate. The allergy status was documented for 91.1% of patients of which 12.4% had a known antimicrobial allergy.

Conclusion

The number of hospitals that participated in the 2016 PPS reflects its value in monitoring antimicrobial prescribing patterns and identifying targets for stewardship interventions.

Initiatives warranting further studies may include reviewing the duration of surgical prophylaxis; methods for reducing healthcare-associated infections; and interventions for reducing the widespread use of broad-spectrum penicillins. Compliance with local antimicrobial guidelines/expert advice is another parameter that may benefit from regular audits.

Anticoagulation review of patients affected by atrial fibrilationa and attending the warfarin clinic in Cork University Hospital

Poster - Abstract ID: 41

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Abstract

Introduction

Atrial fibrillation (AF) is a wide spread heart rhythm condition which affects 33.5 million people worldwide. The major concern with people affected by AF is the onset of stroke[1].

Although warfarin has proven to be an invaluable anticoagulant for stroke prevention in patients affected by AF, it is characterized by a narrow therapeutic index, numerous drug and food interactions and a slow onset of action.

The latest NICE guidelines[2] on the management of AF recommend reassessing anticoagulation in patients on warfarin[A1] .

Aims

The aim of this study is to assess and evaluate the anticoagulation status of patients affected by AF, who regularly attend the warfarin clinic at Cork University Hospital and identify those patients who would benefit from an alternative stroke prevention strategy such as the use of a Non-vitamin k antagonists Oral Anticoagulants (NOACs).

Methods

For six months, the INRs of patients who attend the warfarin clinic of CUH were evaluated in terms of the following parameters[A2] [VS3] [2]:

- TTR less than 65%.
- Two INR values higher than 5
- One INR value higher than 8 within the past 6 months
- Two INR values less than 1.5 within the past 6 months

Patients were screened using the DAWN AC anticoagulation software.

Results

Data showed that over a six month period that 33% (109/333) of AF patients had a TTR <65%, 3.6% (12/333) had two INR values less than 1.5, 1% (3/333) had two INR values>5 and 1% one INR value>8.

Conclusion

Patients, who are poorly anticoagulated and for whom the factors that caused the poor anticoagulation have been established but not resolved, should be switched to a more effective type of anticoagulation such as a NOAC, where appropriate.

References

1) 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. Europace. **2016** Nov;18(11):1609-1678.

2) Atrial fibrillation: management | Guidance and guidelines. 2014 June. NICE cg 180

Antimicrobial Point Prevalence Survey of Six Maternity Hospitals / Units in Ireland 2016

Poster - Abstract ID: 44

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Abstract

Introduction

The annual national antimicrobial point prevalence survey (PPS) of hospital antimicrobial prescriptions in Ireland audits antimicrobial prescribing practices for patients in a diverse group of hospitals. Findings of this national PPS are often not relatable to maternity services, which provide specialised care for two distinct patient groups, namely mothers and neonates, who have different needs to the general hospital population.

Aim

To collate antimicrobial PPS data within maternity services in order to provide a more representative picture of antimicrobial prescribing practices.

Methodology

The national antimicrobial PPS was conducted from September to October 2016. Antimicrobial pharmacists in six maternity hospitals/units devised a modified PPS data collection tool that captured additional information relevant to prescribing in maternity services. Data were analysed by the maternity hospital antimicrobial pharmacists.

Results

In total, 1121 patients (625 adults, 496 neonates) were reviewed and 186 patients were prescribed antimicrobials (140 adults, 46 neonates), a median prevalence of 16.7%. The median prevalence of antimicrobial use in adults and neonates was 18.4% and 12.2% respectively. A total of 268 antimicrobial agents were prescribed (170 adult prescriptions, 98 neonatal prescriptions). Co-amoxiclav was most commonly prescribed (24.1%), followed by gentamicin (23%), and benzylpenicillin (18.7%). The median percentage of parenteral therapies over all therapies was 78.9%, of which 3.2% could have been switched to oral agents. Peripartum pyrexia (24.6%) in obstetric care and early-onset sepsis (81.4%) in neonatal care were the most common treatment indications. Prescribed agents were fully compliant with local guidelines or microbiologist/ID physician advice for 89.9% of adult and 97.8% of neonatal prescriptions.

Conclusion

The median prevalence of antimicrobial prescribing in maternity services was lower than the national median (37.8%) and was higher in obstetric/gynaecological patients compared with neonates. A higher median percentage of parenteral therapies were used in maternity services compared to the national median (64.3%) (1).

References

1. Hogan-Murphy D, Philbin M, Oza A, Cunney R. Annual antimicrobial point prevalence survey of hospital prescriptions in Ireland. 2016. [Available at hpsc.ie]

Audit in action: Assessment of Individual Patient Medicine Drawers in an Inpatient Hospice Setting

Poster - Abstract ID: 31

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1. *Our Lady's Hospice,* ***2.*** *Blackrock Hospice*

Abstract

Introduction:
A system of storing medicines in locked drawers in patient rooms was introduced to support timely administration of medications. This represents a departure from dispensing from drug trolleys. An initial audit was conducted to assess the contents and suitability of the medicines in the locked drawers and to identify any possible risk issues. This audit identified a number of medicines management issues. Recommendations were made to address these. The contents of the drawers were them re-audited on two occasions and to re-assess for potential risk issues within the system and the impact of addressing medicines management issues.

Design & methods:
An audit of patient medicine drawers was conducted in February 2016. The medicines in the drawer were assessed against the inpatient prescription chart. Re- audit was conducted in July 2016 and October 2016.

Results:
In February, a total of 33 drawers were assessed. At each re-audit 33% of the ward was assessed (4 drawers on each re-audit).

The findings were as follows:
Drawer Contents (Feb, July, Oct)
% Medicines discontinued on prescription chart: 6%,6%,0%
% Medicines not prescribed on prescription chart: 3%, 0%, 0%

Regular Medicines (Feb, July, Oct)
% Present in drawer: 96%, 91%, 92.5%
% Patient's Own Drugs in use: 3%, 3%, 3%
% Medicines unsuitable for use: 4%, 0%, 0%

Conclusion:
On re-audit both the percentage of 'medicines not prescribed on the prescription chart' and of 'medicines unsuitable for use' fell to zero, indicating improved medicines management. Additionally, the re-audit did not identify any new risks associated with the current system.

It is recommended that clear procedures and documentation are developed to support this system with consideration of a second checking system and regular drawer checks.

Audit of echinocandin usage in MMUH

Poster - Abstract ID: 68

Ms. Nuala Scanlon [1], ***Prof. Margaret Hannan*** [2], ***Prof. Ciaran Meegan*** [3]

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Abstract

Introduction: Expenditure on caspofungin, an echinocandin antifungal, rose significantly in MMUH in 2015. Caspofungin is broad spectrum and active against most types of candida. MMUH is a tertiary referral centre and receives complex patients undergoing intra-abdominal procedures and solid-organ transplantation. These patients are at risk of invasive candidiasis. Caspofungin is very expensive, however, and fluconazole, an azole antifungal, is significantly cheaper and also active against several types of candida. European and American Guidelines on the treatment of invasive candidiasis have recently been updated and give guidance on antifungal treatment along with Beta-D Glucan and Galactomannan testing.[1,2]An audit of caspofungin was worthwhile given our increased expenditure on this agent.

Aim:

1. Evaluate the appropriateness of indications for caspofungin.
2. Evaluate the use of caspofungin in MMUH with regard to compliance with international guidelines.

Methodology:

- Patients receiving caspofungin were identified through dispensary reporting and antimicrobial pharmacist ward rounds.
- These patients were reviewed between October 2015 and October 2016 for appropriateness of caspofungin use with a Clinical Microbiologist.
- De-escalation to fluconazole or stopping antifungal therapy was recommended where clinically appropriate by the Microbiologist

Results

Patients in MMUH received 159 courses of caspofungin in the 12-month period. The main indications for caspofungin were intra-abdominal sepsis, lower respiratory tract infection and peri-operative use in lung transplantation. The majority of use was empiric as opposed to targeted at a positive culture. Beta-D-Glucan and Galactomannan results were available for only a minority of patients. Expenditure on caspofungin reduced significantly by 45% in 2016 compared to 2015.

Conclusion

Suspected candidiasis is one of the main indications for echinocandin use in MMUH. More cost-effective use of an echinocandin could be achieved through on-going prospective audit by an Antimicrobial Pharmacist and Microbiologist. The real-time availability of laboratory markers of fungal infection could also enable more directed therapy.

References

References:

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- Ullmann AJ et al. ESCMID Guideline for the diagnosis and management of Candida diseases 2012: developing European guidelines in clinical microbiology and infectious diseases. Clinical Microbiology and Infection 2012; 18 (Suppl 7) :1-8.

Audit of Medication Reconciliation at Intensive Care admission and discharge in Galway Clinic: A Quality Improvement Initiative

Poster - Abstract ID: 91

Ms. Rebecca Breslin [1], ***Dr. Sean Ahern*** [1]

1. *Galway Clinic*

Abstract

Introduction
Medications are prescribed electronically on two systems in Galway Clinic – Meditech is used for 5 inpatient wards and ICIP is used in the Intensive Care Unit (ICU). Errors and omissions in medication reconciliation occur on transfer between care settings[1/2]. A transparent process is required in this high risk setting. Hospital policy requires that ALL pre-admission medications are transcribed onto ICIP at ICU admission and placed on hold if appropriate.
Aims
To determine extent and types of prescribing errors/discrepancies at the interface between the ward and ICU by audit. To introduce measures to improve this process.
Methods
Individual medication orders were counted and compared pre and post-transfer between ward and ICU for all patients over 5 weeks (n=22). Types and causes of discrepancies were identified. Results were displayed weekly on a runchart as a percentage of medications charted appropriately.
Results
Prescribing at admission to ICU steadily improved over 5 week audit period with a compliance percentage of 100% at week 5. Prescribing on discharge from ICU improved initially then tailed off. Overall percentage of medications charted correctly was 82% and 85% at admission and discharge respectively.
6 patients (27%) had errors at both points of transfer. 5 patients (23%) had no errors at either point.
Discrepancies were due to an incomplete 'Interface Medication Summary Report' document (5 patients), medication transcription errors and lack of familiarity/training on the 2 electronic systems. Inadequate documentation of intent by prescribers was an issue.

Conclusion and Recommendations
Policy was developed with clarified roles for ICU/ward prescribers. Training was carried out. Report Document was amended.
Recommendations included:

- Repeat audit in January to assess impact of improvement measures
- Ward-based clinical pharmacy
- Repeat audit on hospital discharge to assess impact on patient outcome
- Investigate whether new ICU module of Meditech is a viable option

References

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Audit of Prescribing Interventions in Systemic Anti-Cancer Chemotherapy (SACT) Prescriptions in an Adult Haematology and Oncology Setting

Poster - Abstract ID: 72

Ms. Hilary Ward [1], ***Ms. Aisling Ni Laochdha*** [2], ***Ms. Fionnuala King*** [1], ***Ms. Gail Melanophy*** [1]

1. *St. James's Hospital, Dublin,* ***2.*** *Trinity College Dublin*

Abstract

Introduction

Many hospitals who administer SACT have introduced an electronic prescribing system in order to reduce chemotherapy prescribing errors and therefore improve patient safety. Prior to the roll-out of MOCIS in St James's Hospital, a baseline audit of chemotherapy prescribing was done.

Aims

The aim of this audit was to determine the intervention and error rate for the existing paper-based chemotherapy prescription format prior to the introduction of an electronic prescribing system.

Method

This was a prospective audit carried out over a two-week period in St James's Hospital. Data collection forms were completed by the haematology/oncology pharmacists for all prescriptions screened; recording all interventions and potential errors. The forms were inputted into SPSS and analysed to determine the overall error and intervention rates and to examine the effect of covariates such as prescription type, prescriber grade, regimen, setting, and cancer type.

Results

A total of 220 prescriptions were screened over the two-week period. Of these prescriptions 144 (65.5%) required one or more pharmacist intervention. The total number of errors and interventions was 378 and the mean number of interventions per prescription was 2.6.

42.6% of these were not classified as errors but still required pharmacist intervention for clarity or safety. The overall error rate was 57.4% of which 47.6% were deemed to be minor, 7.7% were moderate and 2.1% were potentially serious.

Three variables were found to be associated with increased prescribing errors namely cycle 1 prescriptions, handwritten prescriptions compared to pre-printed proformas; and haematology prescriptions compared to oncology.

Conclusion

Approximately 91% of errors and interventions identified in this audit would be eliminated with the introduction of an e-prescribing system. The most common pharmacist interventions involved clarifying handwritten demographic data and completing missing information such as due date of treatment.

References

Available on Request

CASE REPORT OF THE USE OF SAVENE (DEXRAZOXANE) IN THE CLINICAL SETTING

Poster - Abstract ID: 69

Mr. Darren Walsh [1], ***Ms. Karena Maher*** [1], ***Mrs. Eimear Mcgowan*** [1], ***Mr. Eoin Tabb*** [1]

1. *University Hospital Waterford*

Abstract

Introduction:

•A 52 years old gentleman diagnosed with a Stage 4 Non Hodgkins Lymphoma (Diffuse large B cell lymphoma (DLBCL) – germinal centre subtype) was undergoing potentially curative chemotherapy treatment with DA-REPOCH.

• DA-REPOCH involves a four day continuous chemotherapy infusion with doxorubicin, vincristine and etoposide.

• At 8pm on cycle 5 Day 2 of treatment, the patient complained of pain over the right axilla. On examination there was a soft palpable area that extended down the arm as shown in the day 1 photograph.

Aims:

•To safely administer dexrazoxane to the patient.

Methods:

•Extravasation from the patient's PICC was suspected.

•The current HSE South East Cancer Centre Extravasation Policy recommends the use of Savene for all suspected anthracycline extravasations > 5mls.

• The HSE South East Cancer Centre extravasation policy guidance was initiated and Dexrazoxane was prescribed.

•Dexrazoxane (Savene) is the only licensed antidote for anthracycline extravasation in Europe. Savene clinical evidence reports that 98% of patients treated do not require later surgical intervention. 71% of patients treated proceed with their scheduled chemotherapy without delay, (Fontane et al 2012).

•Savene is mutagenic in nature, thereby requiring all standard cytotoxic chemotherapy health and safety precautions.

•It is administered as three intravenous infusions over three days; the first infusion must be commenced within 6 hours of the extravasation occurrence.

Results:

•The patient has made a full recovery from the extravasation and continued with an altered chemotherapy plan (RCHOP) .

•The patient did not require surgical intervention.

Conclusions:

•This case report highlights the importance of prompt action when an anthracycline extravasation is suspected.

•The prompt use of dexrazoxane is justified where there is a strong suspicion of anthracycline extravasation.

•It is important to be aware that the risk of extravasation although less, is still present with a CVAD.

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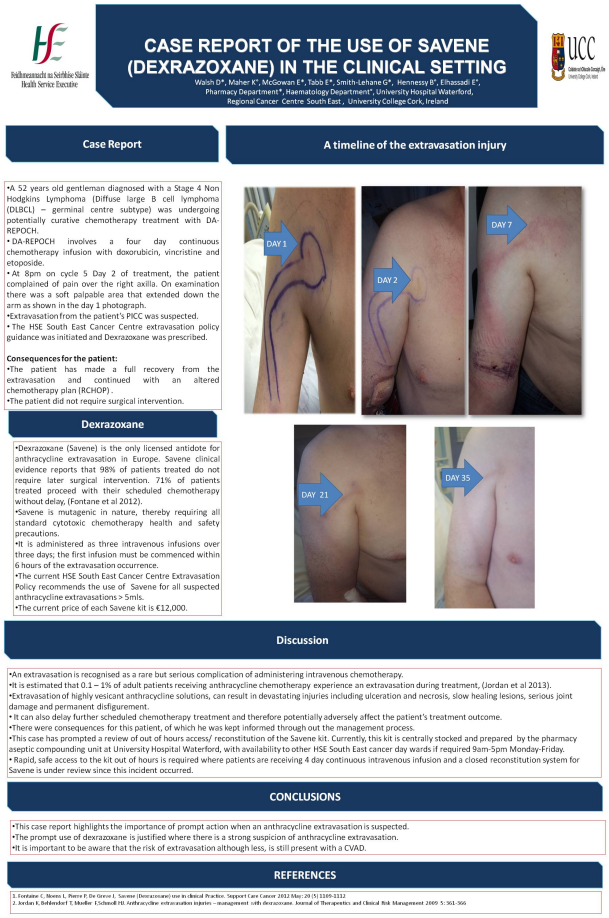

Case report - dexrazoxaneuse.jpg

CLINICAL PHARMACIST INTERVENTIONS IN THE EMERGENCY DEPARTMENT AND THEIR IMPACT ON PREVENTABLE ADVERSE DRUG EVENTS AND ASSOCIATED COST AVOIDANCE.

Poster + Oral Presentation - Abstract ID: 130

Ms. Joanne Gaskin [1], ***Ms. Elaine Conyard*** [1]

1. *Dept. Pharmacy, Our Lady of Lourdes Hospital, Drogheda*

Abstract

Introduction: A new clinical pharmacist service was established in the Emergency Department (ED) of a 339 bedded Acute General Teaching
hospital in Ireland which serves a population of over 300,000.
Aims :This study evaluated the type and frequency of a clinical pharmacist's interventions in the ED and their effect on preventable adverse drug events (ADEs) and their cost implications.
Method: The study was a cross sectional, observational study of all clinical
pharmacist interventions completed on lodged (or inpatient) adult (≥16 years old)
prescriptions in the ED over 22 consecutive working days. The Pharmaceutical
Care Network Europe 2010 Classification system for Drug Related Problems(1) and
the National Coordinating Council for Medication Error Reporting and Prevention
Index for Categorizing Medication Errors(2) were used to categorise interventions. Cost benefit analysis was also performed through the Nesbit Method(3) using probability scoring of patient drug harm in the absence of pharmacist intervention.
Key Findings: 92 patients required no ED pharmacist intervention and 169 patients required at least one intervention. 289 interventions were completed on 169 patients with a prescriber acceptance rate of 61.9%. The predominant intervention type was the omission of regular medication on admission (36%). 65.1% of ED pharmacist interventions were categorised as a potential ADE and 3.5% were categorised as actual ADEs by two ED consultants. In comparison, the ED pharmacist categorised 67% of interventions as a potential ADE and 11.4% as
actual ADEs. A cost benefit of €20,876 and a cost benefit ratio of 3.76:1 was
associated with the ED pharmacist service through the avoidance of ADE costs in
the study.

Conclusion: An ED clinical pharmacist service has demonstrated a positive impact
on identification and reduction of preventable ADEs. This reduction in patient drug
harm corresponds to a cost avoidance in excess of three times the cost of the
pharmacist service

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Clozapine Dispensing Service – Efficiency through Digitisation

Poster - Abstract ID: 115

Ms. Helen Danaher [1], ***Ms. Louise Kennedy*** [1], ***Mr. Nik Nikolic*** [1], ***Ms. shirley guerin*** [1]

1. *Phoenix Pharmacy Department, c/o St Mary's Hospital, Phoenix Park, Dublin 20*

Abstract

Establishment

Phoenix Pharmacy Department, c/o St Mary's Hospital, Phoenix Park, Dublin 20

Introduction

The Clozapine Dispensing Service (CDS) is a core service of the Phoenix Pharmacy Department (PDD). PDD dispenses clozapine for three mental health services using a checklist system, this involves dispensing for 290 patients across 72 different locations on a weekly, fortnightly and monthly basis. The majority of these patients are under the care of community and rehabilitation outpatient teams. CDS shows an average annual increase of 3.1% in its clozapine population.

Aim

- To simplify CDS
- Enable process efficiency improvements
- Improve safety and quality
- Facilitate service expansion

Methodology

- Plan-Do-Check-Act Cycle[1] was initiated by process mapping and analysis.
- A second time study was performed in November 2016.

· Initial two week time study was performed in April 2016.

· Lean transformation included a new process and formulating a comprehensive database on Excel. Data input was done by a senior pharmacist.

· Database was verified by a senior pharmacist and a senior technician.

· The new process was piloted over 4 weeks and validated against the previous process.

Results

- The CDS was streamlined and simplified.
- One database checklist was created using Excel and this replaced the three separate Microsoft word checklists.
- The new process generated a 15% time saving.

Conclusion

Digitisation and forward planning enabled service evaluation and improvements in process quality. The WHO[2] state that checklists have improved reliability and helped to standardize patient care. Implementing the checklist effect increases safety. Pharmacy services can benefit from time savings by expanding the service, improving clinical and information governance and identifying further needs. Efficiency through digitisation will enable medicines optimisation.

References

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Co-location of an Aseptic Compounding Unit with an Oncology Haematology Unit: The Impact on Chemotherapy Deliveries. Mater Misericordiae University Hospital

Poster - Abstract ID: 71

Ms. Brid Ryan [1], ***Ms. Dearbhla Murphy*** [1], ***Prof. Ciaran Meegan*** [2], ***Ms. Nina Acosta*** [1], ***Ms. Kate O callaghan*** [1], ***Ms. Rita Antalikova*** [3], ***Ms. Jayne Tuthill*** [3], ***Ms. Pauline Gavin*** [1], ***Ms. Leah Conroy*** [2], ***Mr. Garreth Dooley*** [2]

1. *Pharmacy Department, Mater Misericordiae University Hospital (MMUH),* ***2.*** *Mater Misericordiae University Hospital,* ***3.*** *Pharmacy Department, Mater Misericordiae University Hospital, Dublin*

Abstract

Introduction:
The NCCP recommend co-locating oncology day wards with Pharmacy Aseptic Compounding Units (ACU) (1) where possible. The MMUH ACU re-located from a detached sterile suite at the rear of the pharmacy seven floors below the Oncology Haematology Unit (OHU) to state of the art facility adjacent to the OHU in May 2016.
Aim:
To investigate the effect of ACU and OHU co-location on the time and skill mix utilised for chemotherapy deliveries.
Methods:

1. Design and pilot a data collection form
2. Undertake pre and post re-location data collection
3. Compare results

Results:
The mean time per delivery halved following co-location; however, the mean number of deliveries per day doubled. Better utilisation of skill mix was possible post co-location with shorter delivery times and co-ordination of deliveries with planned exit/entry to the ACU e.g. lunch and breaks while still maintaining clinical input with staff on the OHU.
Limitations:
A pharmacy intern was in place during post re-location audit. An unsustainable level of delivery may have been recorded. Pre-co-location data excluded deliveries to/from the pharmacy and microbiology laboratory. Post co-location audit included all deliveries to/from the ACU.
Table 1: Pre and post co-location delivery times
Conclusion:
Reduced delivery times are advantageous given the cytotoxic nature of chemotherapy. Co-location reduces the time per individual delivery but not the overall time dedicated to deliveries. Further research into turnaround times from ordering to delivery is warranted to establish if increasing the number of deliveries per day has a positive impact on patient waiting times resulting in better patient experiences and improved OHU functionality.
References

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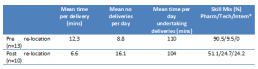

		Mean time per delivery (mins)	Mean no deliveries per day	Mean time per day undertaking deliveries (mins)	Skill Mix (%) Pharm/Tech/Intern*
Pre (n=13)	co-location	12.3	8.8	110	90.5/9.5/0
Post (n=10)	co-location	6.6	16.1	104	51.1/47.7/1.2

Table 1 pre and post co-location delivery times.png

Cockcroft & Gault - adding weight to the subject; an organisational change

Poster - Abstract ID: 73

Ms. Dawn Davin [1], ***Ms. Edwina Morrissey*** [1], ***Ms. Joan Mcgillycuddy*** [1], ***Dr. Peter Lavin*** [1], ***Dr. Catherine Wall*** [1], ***Prof. George Mellotte*** [1]

1. *Tallaght Hospital, Dublin*

Abstract

Aims

Review the evidence base for calculating renal function in obese patients for drug dosing.

Gain collaborative input from involved stakeholders to ensure a comprehensive review process, enabling change at an organisational level to ensure best practice, patient focused care.

Methods

A comprehensive literature review was carried out. The evidence base was presented to three consultant nephrologists by members of the pharmacy team. The change in practice was submitted to our Drugs & Therapeutics Committee before implementation and dissemination. Nurse Practice Development were involved regarding practical aspects of ensuring routine weight and height measurement and documentation at ward level. Other stakeholders were consulted to ensure all patient groups were considered.

Results

A collaborative decision was made regarding the most appropriate weight to use in the C&G equation based on patients' BMI bands.

A validated electronic medical calculator (MDCalc®) was selected as part of this practice change. After consultation with the authors, weight selected for use in the C&G equation was aligned with the evidence based BMI bands. It was validated and available as an open website and free ios app. We also carried out an internal validation before recommending its use.

Conclusion

The amended guidance has been updated on our electronic formulary app. The information has been disseminated internally and presented externally. We are in the process of publishing our practice change, demonstrating how evidence and collaboration can combine to contribute to positive patient outcomes.

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11. Food and Drug Administration Center for Drug Evaluation and Research (CDER) Guidance for Industry: Pharmacokinetics in Patients with Impaired Renal Function - Study Design, Data Analysis, and Impact on Dosing and Labeling. Draft Guidance March 2010.

Collaborative Pharmaceutical Care at Cork University Hospital (CUH) – Classifying the viscosity of liquid medications, stocked in Cork University Hospital, to reduce aspiration risk in elderly dysphagic patients.

Poster - Abstract ID: 45

Ms. jean hosford [1]***, Ms. Sheila Robinson*** [2]***, Ms. Deirdre Lynch*** [3]

1. *Pharmacy Department, Cork University Hospital, Wilton, Cork,* ***2.*** *Speech and Language Department, Cork Univeristy Hospital, Wilton, Cork,* ***3.*** *Pharmacy Department/Cork University Hospital*

Abstract

Introduction

The prevalence of dysphagia increases in the elderly due to age related changes in swallowing capability combined with increased prevalence of medical conditions, with dysphagia as a co–morbidity (1). Liquid medications are often considered as alternatives to solid oral dosage forms in dysphagic patients but these may be too thin for patients for whom Speech and Language therapists have recommended thickened fluids, thus putting patients at risk of aspiration.

Aim/Objective

- Classify the viscosity of liquid medications stocked in the pharmacy department.
- Develop a resource outlining the viscosity of oral liquid medications that clinical pharmacists and nurses may consult to help promote safe oral liquid medication administration to dysphagic patients.

Methodology

Irish Consistency Descriptors set by The Irish Association of Speech and Language Therapists (IASLT) were followed by a senior Speech and Language therapist to grade liquid viscosity (2).

Normal = (unmodified regular fluids)

Grade 1 = (very mildly thick)

Grade 2 =(mildly thick)

Grade 3 = (moderately thick)

Grade 4= (extremely thick)

A resource listing the viscosity of all liquid medications stocked in pharmacy was uploaded on the pharmacy share drive for clinical pharmacists to consult and attached to drug trolleys on the care of the elderly ward following nurse education.

Results

A total of 49 oral liquid medications were graded.*

Viscosity grading	**No. of liquid medications**
Normal	27
Grade 1	13
Grade 2	9
Grade 3	0
Grade 4	0

ALL liquid medications graded had too thin a viscosity for patients for whom Speech and Language recommended either Grade 3 or Grade 4 liquid medications.

Conclusion

An information resource has now been developed to address a gap in the care of dysphagic patients who are put at an increased risk of aspiration by administering inappropriate viscosity oral liquid medications.

* List available upon request.

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Viscosity grading	No. of liquid medications
Normal	27
Grade 1	13
Grade 2	9
Grade 3	0
Grade 4	0

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Compatibility between drugs and consumables: Assessing a new drug before introduction to the Aseptic Unit

Poster - Abstract ID: 9

Mrs. Louise Byrne [1], ***Ms. Mary Cleary*** [2], ***Ms. Aidene Browne*** [3], ***Mrs. Li Wah Kyaw Tun*** [1]

1. *Tallaght Hospital,* ***2.*** *Trinity College Dublin,* ***3.*** *Royal College of Surgeons in Ireland*

Abstract

Introduction: Drug compatibility issues arise from interactions between the drug and consumables for compounding and/or administration. These consumables include infusion bags, syringes, administration giving sets etc. The inappropriate use of incompatible material with certain drugs can cause safety concerns. A new drug set up is one of the processes in the Aseptic Unit (AU) whereby a new drug is examined for its suitability for compounding in the Unit. This process requires the pharmacist to check the material's appropriateness against the specifications of the new drug.

Aims: To improve the process, the following objectives were identified. To draw up: 1) a database listing the common plastics and plasticisers used in medical devices; 2) a checklist and a procedure for new drug set up.

Methods: A project was undertaken with two pharmacy students. An entire list of consumables stocked in the AU was obtained. For wards, we concentrated only on the types of administration giving sets stocked. This is because compatibility issues and material specifications usually relate to the tubing composition and/or the need for in-line filter. The Hospital's Materials Management Department, which is responsible for purchasing supplies, was consulted for these lists. The manufacturers of these products were contacted requesting for their product datasheets. The information collected was compiled and presented.

Results: Compatibility data were presented as a reference database in Excel. Documents generated from this project become training tool for new pharmacists in the AU.

Conclusion: Assessing and ensuring compatibility between the drug and consumables is an important part of the new drug set up process in the AU. The information and datasheets obtained in this project are also a useful reference resource for medicines information enquiries in general. The database will require regular revision and updates particularly when new consumables are introduced or when new compatibility information becomes available.

Compliance with local antimicrobial guidelines for surgical prophylaxis in urology: a prospective audit in a university teaching hospital in Ireland

Poster - Abstract ID: 60

Ms. Diana Hogan-Murphy [1], ***Ms. Roisin O Brien*** [2], ***Dr. Una NiRiain*** [1]

1. *University Hospital Galway (UHG),* ***2.*** *National University of Ireland, Galway*

Abstract

Introduction

Surgical prophylaxis is the use of antibiotics to prevent surgical site infections (1). Compliance with antibiotic guidelines for surgical prophylaxis in urology has been identified as an area that requires improvement (2).

Aims

The aim of this project was to review surgical prophylaxis in urology services against local antimicrobial guidelines in a university teaching hospital in Ireland in order to identify areas for quality improvement.

Methods

A prospective clinical audit was carried out in a university teaching hospital over a four-week period in October 2016. Inpatients and outpatients undergoing elective and emergency surgeries in urology who received antibiotics for the purpose of surgical prophylaxis for a procedure referred to in the local antimicrobial guidelines were included. Patients were identified via theatre lists and daily consultation with urology teams. Data were collected using an agreed audit tool, inputted into excel, anonymised, independently analysed, and securely stored.

Results

A total of 124 patients met the inclusion criteria. Compliance with individual elements of the hospital antimicrobial guidelines, namely: indication for prophylaxis, antibiotic choice, dose, timing of first dose, and duration were 70%, 66%, 62%, 41%, and 95% respectively. Adherence to all aspects of the guidelines was 12%. Lack of documentation of administration times for first dose antibiotics resulted in the exclusion of 35% antibiotic agents. Fifty-two percent of prescriptions for gentamicin were sub-therapeutic. Areas identified for quality improvement include timing of first dose antibiotics, calculated therapeutic gentamicin dosing, and better documentation.

Conclusion

Compliance with all parameters recommended in the local antimicrobial guidelines is central in ensuring the effectiveness of antibiotics for surgical prophylaxis and preventing the incidence of adverse events. Areas of excellence included duration of antibiotic prophylaxis. Aspects that may benefit from antimicrobial stewardship initiatives include timing of first dose antibiotics, accurate gentamicin dosing, and improved documentation.

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Complying with the requirement to report medication variances into the State Claims Agency's (SCA's) 'National Incident Management System' (NIMS) while continuing to learn from variances locally in the Mater Misericordiae University Hospital (MMUH).

Poster - Abstract ID: 30

Ms. Deirdre Lenehan [1], ***Ms. Leah Conroy*** [1], ***Prof. Ciaran Meegan*** [1]

1. *Mater Misericordiae University Hospital*

Abstract

Introduction

MMUH staff report medication variances on a designated form. The Drug Safety Service records these variances in an Excel® Database and grades them using a locally assigned 'High-Low' risk rating scale. Following the introduction of the NIMS and associated National Incident Report Form (NIRF) by the SCA, the Drug Safety service needed to review local reporting / recording processes to determine how to ensure compliance with the NIMS while avoiding duplication in these processes.

Aim/Objective

To identify the data fields required by NIRF / NIMS and determine if these could be incorporated into the established MMUH medication variance processes to avoid dual reporting and recording of such variances.

Methodology

1.The NIRF / NIMS data fields were reviewed and compared to the MMUH reporting / recording system to identify discrepancies.

2.The local Database was updated to include additional analytic data fields required by NIMS, without having to introduce the NIRF into practice.

3.January-May 2016 variance data was input into the newly adjusted Database by Pharmacy Department personnel and subsequently into NIMS by Risk Management personnel.

Results

6 additional data fields were identified as required by NIMS. None of these fields required reporter input and thus the introduction of the NIRF, with associated dual reporting, was avoided. These additional data fields were incorporated into the recording process, ensuring minimal impact on Drug Safety Service workload. Of note, all variances input into NIMS from January-May 2016 were assigned a 'negligible' risk rate by the system while the risk rates assigned locally to the same variances ranged from 'high' to 'low'.

Conclusion

From January 2016, the MMUH has complied with the SCA requirement to report medication variances into NIMS, without introducing the NIRF into practice, by adapting the MMUH medication variance recording system and thus avoiding duplication in reporting or recording processes.

References

1. The State Claims Agency Newsletter, January 2015

Development and Implementation of a new medication chart for an acute general hospital.

Poster - Abstract ID: 81

Ms. Bernie Love [1], ***Mr. Derry O loan*** [1], ***Ms. Michelle Griffin*** [2], ***Mr. James Carr*** [2]

1. *Connolly Hospital Blanchardstown,* ***2.*** *Connolly Hospital, Blanchardstown*

Abstract

Introduction:
The process of updating the hospital's medication administration record (kardex), was undertaken in Connolly Hospital Blanchardstown(CHB) in January 2015. The inclusion of several new sections as recommended by best-practice guidelines such as a dedicated section for antimicrobial therapy, oxygen therapy, continuous infusions, fluids & electrolytes, pre-admission medication list, anti-thrombotics, and a communication section was considered ideal to ensure patient safety.
Aim:
The aim of this project was to seamlessly transition a new kardex into an acute general hospital.
Methodology:
The revised kardex was piloted in certain areas (surgical ward, medical ward, critical care area) to ensure suitability before hospital-wide roll-out. Feedback was actively sought from front-line users, collated and statistically analysed which subsequently informed the final design. Hospital-wide implementation was completed successfully in August 2016. An explanatory document was devised to aide the transition and education sessions were widely conducted. Ten weeks after launch, a user satisfaction survey was completed with 25 front-line users & user activity of new kardex was assessed.
Results:
The overall satisfaction score for the pilot kardex was 73% (expected satisfaction in a larger population calculated at 62%). After amendments to design, incorporation of feedback & hospital-wide implementation, 96% of those interviewed were satisfied that the new kardex works well. 20 kardex's were selected at random to assess how accurately they were completed. Sections not being utilised were the pre-admission medication list, and 'required on discharge' tick box.
Conclusion:
There is a high level of satisfaction amongst front-line users with the new kardex in CHB. Some sections were identified as not being utilised such as pre-admission medication list and 'required on discharge' facility. The interfaces of admission and discharge are well documented for their potential for medication errors therefore this highlights an area of risk & for further intervention.

Development of Emergency Department Intranasal Drug Administration Protocols

Poster - Abstract ID: 49

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1. *Pharmacy Department, Mater Misericordiae University Hospital, Dublin,* ***2.*** *Emergency Department, Mater Misericordiae University Hospital, Dublin*

Abstract

Introduction: Intranasal delivery of medication offers a safe, effective and convenient alternative to traditional routes of administration. Intranasally administered medications are delivered directly to the central nervous system, avoiding first-pass metabolism; therefore bioavailability remains higher than orally- or rectally-administered drugs. In Ireland, the Pre-Hospital Emergency Care Council endorses the use of Intranasal Fentanyl and Midazolam in the adult population by Advanced Paramedics.
Aim: To improve emergency pain, sedation and agitation management through the development of drug administration protocols for Intranasal Fentanyl and Midazolam in the Emergency Department (ED), MMUH.
Methods:

1. A literature review was conducted to ascertain current practice with respect to safe dosing and administration of intranasal Fentanyl and Midazolam, in response to a request from an ED Consultant.
2. Liaison with MMUH ED Medical and Nursing staff with a view to establishing the place in therapy of intranasal drug delivery and practical aspects.
3. Identification of a suitable atomiser device to facilitate intranasal drug delivery.
4. Development of protocols in collaboration with the MMUH ED staff and Drugs and Therapeutics Committee.
5. Implementation in the ED setting.

Results:
A suitable atomiser device was selected to facilitate the administration of both drugs. Protocols were successfully developed and the emergency management of pain and agitation was aligned with the pre-hospital care standards for applicable patients. The development of an intranasal Midazolam protocol also provides an alternative administration route for procedural sedation in the Emergency Department.
Conclusion:
While this is a well-established practice in the management of paediatric patients, it is hoped that the development of these protocols will enhance the care of patients in the MMUH ED. Intranasal drug administration will provide a safe and alternative method of drug delivery in acutely unwell patients.
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Do you really still need the on-call pharmacist?

Poster - Abstract ID: 97

Mrs. Carol O Brady [1]

1. *Tallaght Hospital*

Abstract

Introduction

Tallaght Hospital Pharmacy Department provides an out-of-hours on-call pharmacy service. We also provide an out-of-hours pharmacy room which is accessed by nursing administration. Information is available in our Medicines Guide regarding these services. On-call query details are documented on record forms by the on-call pharmacist.

A review of the queries received over an 8 month period during 2013/14[1] was carried out. In order to fulfil a best practice continuous audit cycle, a re-audit of 8 months of on-call queries received during 2014/15 was completed.

Aim/Objectives

Quantify and identify frequently occurring queries to the on-call pharmacist for 2015/2016.

Determine if there have been any changes in trends in queries following improvements.

Ascertain nurses understanding of the on-call service.

Methods

An audit of on-call record forms was carried out from July 2015 to June 2016 looking at common medications and common queries. Microsoft Excel and SPSS were used to analyse the data. Comparisons were made to the previous audits. A questionnaire was used to ascertain nurses understanding of the service.

Results

In the 15 month study period 745 on-call queries were documented. 4% of the calls resulted in the on-call pharmacist having to come in to the hospital to supply medication. This figure was 12% in the 2013/2014 audit thereby demonstrating a significant improvement to timely patient care.

The medications queried most often remained constant. These included gentamicin, vancomycin, parenteral nutrition, fentanyl and oxycodone.

Awareness among nurses of previously produced and circulated flowcharts on how to access the on-call service was low.

Conclusion

This audit shows that the changes implemented have resulted in service improvements for pharmacy, medical and nursing staff. This has resulted in improved and more timely patient care.

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Early real world experience with a tenofovir alafenamide (TAF) based single-tablet regimen (STR)

Poster - Abstract ID: 103

Ms. Catherine Boyle [1], ***Ms. Ciara Levey*** [1], ***Ms. Clara Alighalib*** [1], ***Prof. Ciaran Meegan*** [1]

1. *Mater Misericordiae University Hospital*

Abstract

Introduction

Genvoya® has been marketed in Ireland since March 2016 for the treatment of HIV-1 infection. It contains the novel oral prodrug tenofovir alafenamide (TAF), co-formulated with elvitegravir, cobicistat and emtricitabine as a STR. TAF has novel pharmacokinetics which appear to have an improved renal and bone safety profile compared to tenofovir disoproxil fumarate (TDF). While the safety and efficacy has been demonstrated in a number of clinical trials, there is little real world data published in treatment experienced patients.

Aim/Objective

- Examine the reasons for switching to a TAF STR
- Evaluate the efficacy and patient reported outcomes from patients treated with a TAF STR

Methodology

Retrospective observational cohort study of patients switched to a TAF STR in a tertiary referral hospital from April to October 2016.

Results

141 patients were switched to the TAF STR. 79% (n=112) were on a TDF backbone. 96% (n=136) had a viral load < 40 copies/ml.

The reason for switching was recorded in 65% of cases. Reasons documented included renal adverse effects (38%), CNS adverse effects including insomnia (15%), decrease pill-burden (5%), gastrointestinal adverse effects (3.5%).

77% (n=109) patients have had a follow up appointment post switch. 100% had a viral load <40 copies per ml. 77% (n=84) reported no adverse effects. 8% (n=9) reported an improvement in side effects experienced on the previous regimen. Side effects reported were gastrointestinal (5.5%) and migraines, light headedness, minor rash (all 1.8%). One person changed back to their previous regimen due to tolerability.

Conclusion

In these treatment experienced patients a TAF STR regimen appears an effective and well tolerated regimen. This real life data supports and adds to the clinical trial evidence for the use of a TAF STR in treatment experienced patients. Longitudinal evaluation of this preliminary data will be useful to examine this topic further.

Educating cardiac rehabilitation patients on their medicines

Poster - Abstract ID: 28

Dr. Virginia Silvari [1], ***Ms. Elizabeth Coman*** [2], ***Mrs. anna keating*** [1], ***Ms. Deirdre Lynch*** [1], ***Dr. Suzanne Mccarthy*** [3]

1. *Pharmacy Department/Cork University Hospital,* ***2.*** *University College Cork/School of Pharmacy,* ***3.*** *University College Cork/Cork University Hospital*

Abstract

Introduction:
Educating patients on their medications is a core component of the cardiac rehabilitation programme. 1
Aims:
This study sought to i) evaluate the medicine management education provided to patients ii) determine patients' perceptions of the benefit of short video presentations.
Methods:
Patients receive one face-to-face group education session by the cardiac rehab pharmacist. Patients completed questionnaires on beliefs about medicines 2, self-perceived knowledge of medicines and adherence.
Patients who consented to receive videos on the medicines were sent an email containing links to the videos relevant to their specific medication regimen. These videos were developed using the software program Videoscribe. 3 This software allows the user to develop high-definition, whiteboard-style animation videos. Videos were developed to cover the main medications used. Qualitative feedback was received from patients two weeks after receiving the email. Ethical approval was granted to conduct this study.
Results:
To date 33 patients have participated in the study evaluating the medicines management education session. Sixteen patients have participated in the evaluation of the videos. All patients reported a benefit from attending the medicines management education session; all agreed or strongly agreed that they knew more about their medicines as a result of the education session. Of the 16 patients who received the videos, ten patients had watched them and provided feedback. All patients found the videos to be useful; comments received included "very simple to follow", "very useful information" and "it explained what side-effects some medicines have".
Conclusions:
This study is providing evidence to support the delivery of education on medication to patients enrolled in a cardiac rehabilitation programme. In addition, this pilot is endorsing the use of technology to improve delivery of information. Offering patients different modes of education, centre-based or online programmes, is likely to improve patients' knowledge and attitudes towards their medications.

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Electronic Chemotherapy Prescribing One Year Post Introduction: Where Are We Now?

Poster - Abstract ID: 89

Ms. Dearbhla Murphy [1], ***Ms. Brid Ryan*** [1], ***Ms. Nina Acosta*** [1], ***Ms. Leah Conroy*** [2], ***Mr. Garreth Dooley*** [2], ***Prof. Ciaran Meegan*** [2]

1. *Pharmacy Department, Mater Misericordiae University Hospital (MMUH),* ***2.*** *Mater Misericordiae University Hospital*

Abstract

Introduction

In 2015, the MMUH introduced the electronic software CATO® for chemotherapy prescribing. Three months post introduction a baseline audit was completed comparing electronic and hand written prescriptions.

Aims

- To re-audit the quality of chemotherapy prescribing 12 months post baseline
- To establish if further quality improvements are required

Methodology

Baseline data was collected on 153 prescriptions. This data was used to inform training for the 2016 prescribers. The baseline data collection tool was reviewed and re-piloted (n=36) by all data collectors for the re-audit.

The National Cancer Control Programme (NCCP) chemotherapy prescription requirements were retained as audit criteria. Omissions and errors were defined as the absence or incorrect recording of NCCP requirements.

Data was collected in November 2016 (n=155) by five pharmacists. All parenteral chemotherapy prescriptions were audited until the sample size was reached. Pharmacists categorised prescription errors/omissions as potentially clinically significant or not.

Results

At least one error was found in 17% of prescriptions (range:1-4), compared with 14% (range:1-2) in the baseline audit.

The mean number of omissions found per prescription increased from 0 at baseline to 0.65. The only criterion omitted from prescriptions was diagnosis.

Errors/omissions considered potentially clinically significant increased from 6% to 13%. Examples of clinically significant errors include supportive care errors and inadvertent dose escalations.

Prescription standards that improved in the re-audit include dose calculations and dose capping. Prescription standards that worsened in the re-audit include supportive care, cycle number and treatment interval.

Conclusion

One year post introduction of CATO®, the rate of errors/omissions has increased but remains less than those recorded with handwritten prescriptions.

Staff turnover (nursing and non-consultant Oncology prescribers) is considered a contributing factor.

Further quality improvement initiatives are needed to improve the electronic chemotherapy prescribing, including on-going training support for service users and routine feedback on common errors.

Extemporaneous Medicines-Pharmacists' Views and Experiences of the Extemporaneous Preparation Process

Poster - Abstract ID: 80

Ms. Aoife Corrigan [1]***, Dr. Dr. Teresa Barbosa*** [2]***, Ms. Maria Creed*** [3]***, Prof. Ciaran Meegan*** [4]***, Dr. Suzanne Mccarthy*** [5]

1. *Mater Misericordiae University Hospital (MMUH), Eccles St, Dublin 7.,* ***2.*** *University College Cork/School of Pharmacy,* ***3.*** *Pharmacy Department, Mater Misericordiae University Hospital, Dublin,* ***4.*** *Mater Misericordiae University Hospital,* ***5.*** *University College Cork/Cork University Hospital*

Abstract

Introduction

This original study explores community pharmacists' views and experiences of the compounding process in an Irish community pharmacy setting. This project identified factors, which influence the participating pharmacists' acceptability of the extemporaneous compounding process. Results of the study can be utilised to further educate stakeholders, thereby supporting the recent Pharmaceutical Society of Ireland (PSI) Extemporaneous Guidance 2015.[1]

Aim/Objective:

To explore community pharmacists' perspectives on extemporaneous compounding in the community pharmacy setting.

Methodology

Participants were selected using purposive sampling.

Fifteen semi-structured interviews were conducted with community pharmacists registered with the PSI on extemporaneous compounding in the community pharmacy setting.

The interviews included nine open and closed questions encompassing the different variables involved in extemporaneous dispensing.

Interviews were audio-recorded and transcribed for analysis.

Data analysis of the data using NVIVO software was used to create nodes and derive themes and subthemes.[2]

Results

Themes

Prior Communication from hospital

- Allows prior organisation
- Provides a source of information
- Resolves potential queries
- Informs the patient
- Decrease patient delays

- Decrease interpretation error
- Decrease transcription error

Potential changes to enhance the process

- Standardisation of:
  - Formulations
  - Prescription form layout
- Specialised compounding pharmacies
- Extemporaneous resource for ingredient incompatibilities, stability information and suppliers

Opthalmic drop preparation

- Perception community pharmacy setting is not suitable
- Insufficient amount of time and staff
- Lacking confidence in aseptic technique
- Prepared to compound with the aid of a protocol and video

Conclusion

A number of difficulties with extemporaneous compounding in the community pharmacy setting were identified and potential solutions determined. Overcoming the barriers associated with the extemporaneous compounding process will ensure the continuing seamless provision of this specialised pharmaceutical service.

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Faecal Microbiota Transplant for the Management of Relapsing Clostridium Difficile Infection, Mater Misericordiae University Hospital

Poster - Abstract ID: 87

Ms. Nuala Scanlon [1], ***Ms. Laura McCabe*** [2], ***Prof. Ciaran Meegan*** [3], ***Dr. Deirdre Brady*** [3]

1. *MMUH,* ***2.*** *Pharmacy Department, Mater Misericordiae University Hospital, Dublin,* ***3.*** *Mater Misericordiae University Hospital*

Abstract

Introduction:*Clostridium difficile*recurrenceoccurs in up to 25% of patients treated with Metronidazole or Vancomycin. Faecal Microbiota Transplant (FMT) is recognised as an emerging treatment for recurrent *C. difficile* infections in patients where antibiotic and other lines of treatment have failed. FMT aims to restore healthy bacteria in the gastrointestinal tracts of patients with recurrent*C. difficile* infection by introducing enteric bacteria from the faeces of healthy donors.

Aim:

1. Determine the efficacy, safety and place in therapy of FMT in the management of recurrent *C. Difficile*infection
2. Investigate availability, storage and supply of Faecal Microbiota Preparations (FMPs) with a view to implementing faecal transplant in the MMUH

Methods:

1. A literature review was conducted to ascertain the role of FMT in recurring *C. difficile*management
2. Liaison with MMUH Consultant Gastroenterology and Clinical Microbiology staff with view to establishing the place in therapy of FMT and clinical governance issues
3. Investigate availability of suitable FMPs for transplant, with due consideration of storage, supply, documentation and patient administration aspects
4. Development of an algorithm to guide appropriate patient selection as FMT candidates
5. Implementation in the MMUH

Results: A suitable FMT preparation was identified. A freezer, suitable for the storage of FMPs was purchased. Procedures for ordering, storage, handling and dispensing were developed. An algorithm detailing the role of FMT in *C .Diff* management in the MMUH was devised.

Conclusion: FMT is available as a safe and effective treatment option for the management of MMUH patients presenting with recurring *C. difficile*infection.

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Giving birth to an Antimicrobial App: Improving access to local antimicrobial and sepsis guidelines by introducing an electronic App

Poster - Abstract ID: 39

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1. *University Hospital Kerry,* ***2.*** *Bon Secours Hospital, Tralee*

Abstract

Introduction

Front line staff in acute hospitals need access to local antimicrobial and sepsis guidelines in order to improve treatment outcomes[5,6]. The use of Apps within healthcare is rapidly expanding[9-14] and is socially and professionally acceptable[15]. International evidence supports the use of apps for the delivery of information to healthcare professionals[2,16]. They have been shown to reach a much wider audience than traditional methods[1,2]. In 2014 the two acute hospitals in Kerry collaborated in the development of a shared antimicrobial App.

Aims/Objectives

1. Improve access to local antimicrobial guidelines (including sepsis guidelines) by making them available on a Smartphone App.
2. Provide identical information on ward-based desktop computers.
3. Minimise the cost of the provision of these devices to the host hospitals involved.

Methodology

4. Available apps were scored for suitability using fixed criteria. Key stakeholders were included in the process. Once funding was secured, the selected App was purchased.

The App was developed in four stages:

1. General background information was introduced (e.g. Disclaimer, penicillin allergy).
2. Guidelines were added.
3. Drug list was developed.
4. Electronic calculators were activated.

Development was primarily undertaken by the Antimicrobial Pharmacists.

Results

In the fifteen weeks since the antimicrobial App went live in Kerry it has been downloaded 694 times and accessed 1,756 times. This high incidence of App use implies guidelines were readily available to clinicians, which research has shown to positively impact on patient care[5,6]. This quality improvement was achieved at zero capital cost to the hospitals involved.

Conclusions

- Developing an antimicrobial App is a multi-step process requiring support from numerous stakeholders.
- Costs can be minimised if allied hospitals share.
- Uptake of an antimicrobial App is immediate.
- Early data suggest an antimicrobial App represents a prudent use of resources.

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Have you tried turning it off and turning it on again?! – Information and Communications Technology (ICT) Contingency Plan for the Dispensary in Tallaght Hospital

Poster - Abstract ID: 20

Ms. Colette Morris [1], ***Mrs. Niamh Kilcullen*** [1], ***Mrs. Carol O Brady*** [1]

1. *Tallaght Hospital*

Abstract

Introduction

The Pharmacy Dispensary in Tallaght Hospital uses ICT resources to dispense medications. In the event of a malfunction with either the dispensing software or the computer hardware, medications will not be dispensed in a timely manner. This delay represents a potential risk of delayed or missed medication doses. From operational and legal perspectives, it is essential that accurate electronic dispensing records are maintained. The need was identified to develop a contingency plan to provide Pharmacy staff with guidance on how to report an ICT issue and how to safely dispense medications in the absence of functioning ICT resources.

Aim/Objective

To develop and implement an ICT contingency plan for the Dispensary of Tallaght Hospital Pharmacy Department.

Methodology

Key stakeholders were consulted with including the Pharmacy Management Team, ICT Department and Clanwilliam Group. The Medicinal Products (Prescription and Control of Supply) Regulations 2003 were referred to. The procedure was written in line with the Tallaght Hospital Procedure Template. Staff education was provided at the weekly departmental meeting. A flowchart was produced for the Pharmacy On-Call Manual.

Result/Discussion

This procedure contains detailed information on how an ICT issue should be reported and managed. It may be necessary to handwrite labels; the procedure contains guidance on prioritising orders and dispensing medications for patients. In order to ensure that accurate dispensing and stock movement records are maintained, orders are retained and medications are charged retrospectively. Following resolution of the problem, staff are encouraged to complete Feedback Sheets.

Conclusion

This procedure contains vital information to guide staff in dealing with an ICT problem to ensure minimal disruption to patient care. The flowchart is a concise summary of the procedure and provides a useful resource for the on-call pharmacist. Feedback sheets provide an opportunity to gather ideas on how the system could be improved.

How to Keep Your Cool When Your Fridge is Heating Up - Refrigerator Contingency Plan for Tallaght Hospital Pharmacy Department

Poster - Abstract ID: 21

Ms. Colette Morris [1], ***Mrs. Niamh Kilcullen*** [1], ***Mrs. Carol O'Brady*** [1]

1. *Tallaght Hospital*

Abstract

Introduction

There are five refrigerators in Tallaght Hospital's Pharmacy department. These refrigerators contain a variety of medications and items including antibiotics, chemotherapy, biologics, blood products, total parenteral nutrition and insulins. The combined cost of these products is significant. In the event of any of these refrigerators malfunctioning, medications must be relocated appropriately in a timely manner to ensure product stability and minimise product wastage.

Aims/Objectives

To develop and implement a procedure to direct Pharmacy staff on how to report a refrigerator malfunction and how to re-locate affected stock.

To incorporate this procedure into the existing Procedure for Temperature Monitoring of Medicines and Investigational Medicinal Products Requiring Storage in Controlled Temperature Environment and in Refrigerated Environment.

Methodology

Key stakeholders were consulted with including the Pharmacy Management Team, Clinical Trials Pharmacist, Clinical Nurse Managers, Medicines Information and Purchasing Department. The procedure was written in line with the Tallaght Hospital Procedure Template. Staff education was provided at the weekly departmental meeting. A flowchart was produced for the Pharmacy On-Call Manual.

Results/Discussion

A list of high-priority refrigerated medications was compiled. These items are high-cost/unlicensed and must be moved to a functioning refrigerator immediately. Full guidance on how and where items should be relocated is provided in the procedure. Items may be moved to functioning refrigerators within the Pharmacy department or to specified wards. In the event of an Aseptic Unit refrigerator being involved, the Aseptic Unit handwashing and gowning procedures must be followed.

Conclusion

This procedure provides Pharmacy Staff with clear guidance on how to effectively manage the malfunction of Pharmacy refrigerators during and outside of normal working hours, thereby minimising costs incurred by product wastage and ensuring product stability and patient safety.

Improving Empiric Antimicrobial Prescribing in the Treatment of UTIs and LRTIs

Poster - Abstract ID: 74

Ms. Sadhbh O Leary [1], ***Dr. Sinead McNicholas*** [1], ***Ms. Pat Conroy*** [1]

1. National Rehabilitation Hospital

Abstract

Introduction

Urinary tract infections (UTIs) and lower respiratory tract infections (LRTIs) are the most frequent indications for antimicrobials in the National Rehabilitation Hospital (NRH). Baseline data collected over six weeks revealed that 64% of prescriptions had empiric treatment initiated as per NRH antimicrobial guidelines, 14% had a 48 hour review documented and 50% were reviewed at 48 hours and appropriate action was taken. Improvements in prescribing would have a positive impact on patient care and hospital antimicrobial use.

Aims

This project was undertaken as part of the Royal College of Physicians Start Smart National Quality Improvement (QI) Programme. The project aim was to have >90% of patients with a UTI or LRTI initially treated empirically as per guidelines, to have a review date documented and to have the prescription reviewed at 48 hours and changed appropriately.

Methods

The three key areas were audited during the six week project and for two weeks after completion. A driver diagram was created to identify areas for change and Plan Do Study Act cycles were completed. The following change ideas were implemented:

1. Education sessions with prescribers.
2. Raising QI project awareness with NRH Consultants.
3. Creation and display of NRH branded poster and mnemonic.
4. Result feedback to medical teams.
5. Increasing awareness of NRH antimicrobial guidelines.

Results

1. Empiric treatment: Increased from 64% to 100%.
2. Documentation of 48 hour review: Increased from 14% to 57%.
3. Appropriate change at 48 hours: Increased from 50% to 100%.

Conclusion

This QI project was successful in improving the appropriate use of antimicrobials in UTIs and LRTIs in the NRH. Although documentation of a 48 hour review date did not occur in all patients, this review did happen and an appropriate change was made. In the future, these QI skills and techniques can be applied to improve empiric prescribing in other infection types.

Improving surgical antimicrobial prophylaxis prescribing on an orthopaedic ward

Poster - Abstract ID: 58

Ms. Leah Gaughan [1], ***Dr. Colum Downey*** [2], ***Dr. Megan Brophy*** [3], ***Mr. Oisin Conaty*** [4], ***Ms. Noreen Carolan*** [5], ***Ms. Ruth Kavanagh*** [6], ***Dr. Fidelma Fitzpatrick*** [7], ***Dr. Karen Burns*** [7]

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Abstract

Introduction: Healthcare-associated infection (HCAI) affects around one in twenty hospitalised patients in Ireland. Surgical site infection is one of the most common HCAI and results in significant morbidity and increased hospital costs.[1] Administering appropriate surgical antimicrobial prophylaxis (SAP), as per hospital guidelines, reduces the risk of developing a surgical site infection.[2]
A baseline audit on the orthopaedic ward revealed poor compliance (20%) with local SAP guidelines. A quality improvement project was initiated to improve SAP prescribing for orthopaedic patients.
Aim: To improve SAP prescribing for orthopaedic patients, according to the four elements of the SAP guidelines (right drug; at the right dose; at the right time; for the right duration) by November 2016.

Methods: Quality Improvement methodology[3] was employed with weekly PDSA *(Plan, Do, Study, Act)*audit cycles to generate and feedback data to prescribers in a timely manner. The outcome measure utilised was percentage compliance with the four elements of the SAP guidelines.

Results: Compliance with the SAP guidelines improved from 20% to 80% between 14th June 2016 and 15th November 2016.

Conclusions: Quality Improvement methodology[3] is a practical and successful intervention to improve practices in a healthcare setting. Engaging directly with the surgeons and anaesthetists proved successful at the start of the project and involvement of orthopaedic team members was critical in achieving improvements in prescribing. Weekly and timely feedback of audit results was effective. Incomplete documentation of anaesthetic records e.g. dose or time of SAP administration contributed to reduced compliance – We hope this can be easily addressed by feedback and increased awareness of the importance of documenting interventions. Involvement and education of ward staff on the duration of surgical antimicrobial prophylaxis in particular was very effective and led to an improvement in the “right duration” element of the guidelines.

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Improving the Accuracy of Discharge Prescriptions (Phase 1)

Poster - Abstract ID: 132

Ms. Marie-Claire Jago-Byrne [1], ***Ms. Pauline Duggan*** [1], ***Ms. Cliodhna Cotter*** [1]

1. *Naas General Hospital*

Abstract

Introduction

Medication reconciliation is considered complete, when each medicine that a person is taking has been actively continued, discontinued, held or modified at each point of transfer, and these details have been communicated to the next care provider[1]. Local practice research had demonstrated that 50% of discharge prescriptions were non-reconciled[2].

Aim

The aim of this project was to improve medication safety at the point of hospital discharge by using targeted medication reconciliation between the doctor and the pharmacist and producing a computer-generated prescription.

Methods

The Health Service Executive Change Model was utilised as a change framework[4]. The project was supported by a literature review and detailed analysis of the pre project status. Evaluation was performed using Stufflebeam's Context, Input, Process, Product (CIPP) model. A pre and post change audit was performed against the HIQA National Standard for Patient Discharge Summary Information 2013[3].

Results

The overall compliance with the HIQA standards increased from 50.4% to 96.9%[5]. The biggest change in percentage compliance was observed in the three communication categories, which explain to community healthcare providers the rationale behind the medication changes made during the hospital stay. Further refinement of the IT program and the targeting of patients are required for the next stage of the project.

Conclusion

The change in practice improved the accuracy of the discharge prescriptions and the evaluation will be used to produce a business case to support the ongoing development of the project. This approach may be transferrable to other hospitals.

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Improving the Quality of Medication Reconciliation at Admission to Naas General Hospital

Poster - Abstract ID: 125

Ms. Marie-Claire Jago-Byrne [1], ***Ms. Claire Domican*** [1]

1. *Naas General Hospital*

Abstract

Introduction

An admission medication reconciliation service was introduced to Naas General Hospital in 2008. The clinical pharmacy service was reconfigured in 2010 to align pharmacists to medical and surgical teams. This service change also incorporated attendance at medical post take ward rounds to facilitate medication reconciliation and support safe prescribing decisions.

In 2012 a medication reconciliation form was introduced to standardise practice. In 2015 the form was updated to include a thromboprophylaxis review box.

Aim

To improve medication safety at the point of admission to Naas General Hospital.

Methodology

The gold standard pre-admission medication list was constructed and compared to the admission medication prescription (AMP) for the randomly selected patients. Any discrepancies were documented and the AMP was reviewed again at 48 hours. Unresolved discrepancies were classified as intentional or unintentional. The data obtained were compared with the previous studies to determine if a reduction in the number of unintentional unresolved discrepancies had taken place.

Results

There was an improvement in the number of patients who had their medications fully reconciled at 48 hours over the seven year period. The 2016 audit demonstrated that a total of 11 patients (15%) were affected by an unintentional unresolved discrepancy at 48 hours. This compared with 24 patients (27.3%) in 2011 and 34 patients (65.4%) in the original audit in 2009.

Conclusion

The main finding of the study was a significant decrease in the number of patients experiencing an unintentional unresolved discrepancy at 48 hours in comparison to the previous studies. The team based pharmacist system allows the pharmacist to discuss the medication reconciliation discrepancies with the team on the post-admission ward round and resolve the issues. The pharmacist also has a better knowledge of the patients presenting complaint, history and treatment plan by being present when prescribing decision are made.

Inhaled Salbutamol Prescription and Administration Record: A Multi-disciplinary Quality Improvement in the Paediatric Ward

Poster - Abstract ID: 121

Ms. mairead galvin [1], ***Ms. Alma O dwyer*** [1], ***Dr. Sarah Barry*** [1], ***Ms. Caitriona Gowing*** [1]

1. *Midland Regional Hospital Portlaoise*

Abstract

Background: Medication safety is a multidisciplinary and collaborative effort to improve patient outcomes by mitigating the risk associated with the medication use process. Nursing colleagues on the Paediatric Unit in Midland Regional Hospital Portlaoise (MRHP) highlighted the need to redesign the paediatric medication chart in relation to inhaled salbutamol prescription and administration.
Aim: To describe a quality improvement process undertaken in the Paediatric Unit in MRHP relating to the introduction of an inhaled salbutamol prescription and administration record.
Results: A novel inhaled salbutamol prescription and administration record was piloted in the Paediatric Unit in December 2016. The process involved multidisciplinary collaboration with nursing, medical and pharmacy professionals to design the record. The initial design was presented at Paediatric Governance, a meeting comprised of Consultant Paediatricians, Paediatric Ward Nurse Managers, Paediatric Clinical Nurse Specialist, Clinical Pharmacist and Quality and Patient Safety Department representative amongst others. The Paediatric Governance Committee approved the QI initiative and provided input with respect to the design. Input was sought from the junior doctors in paediatrics by the NCHD lead to further refine the design and synchronise the record with clinical monitoring requirements. The pilot was commenced in December 2016 with ongoing review.
Discussion: Quality improvement is an important tool for mitigating risk within the medication use process. Collaborative approaches to initiating quality improvement enable the most effective solutions to be identified and provides a platform for multiple professional viewpoints to be considered.

Introducing a Clinical Pharmacist to a Care of the Elderly (COE) Day Hospital

Poster - Abstract ID: 34

Mrs. Joanna Carroll [1], ***Dr. Carmel Curran*** [2], ***Prof. Ciaran Donegan*** [2], ***Prof. David Williams*** [2], ***Ms. anne marie cushen*** [1], ***Ms. Nuala Doyle*** [1]

1. *Pharmacy Department, Beaumont Hospital,* ***2.*** *Department of Geriatric and Stroke Medicine, Beaumont Hospitall*

Abstract

Introduction
A new clinical pharmacy (CP) service to a Care of the Elderly (COE) hospital was established in January 2016. Medication review is an essential part of comprehensive geriatric care, and is a primary function of the Clinical Pharmacist (CP).

Aims
The CP service centres on medication review and patient education, with the aim of improving outcomes from medication use.

Methods
Data from the first three months of the service were collected prospectively to measure the quantity and type of CP interventions. The potential clinical outcome of each intervention was assessed by the day hospital CP and a Gerontology SpR using a validated visual analogue scale (0-10, 0 representing no potential effect and 10 representing death). The frequency with which advised changes were acted upon by the treating doctor was also recorded.

Results
195 patients (mean 81 years, age range 58-98 years) were reviewed during 33 clinic days. A current medication list was obtained for all patients and an average of 1.8 pharmaceutical care interventions were identified per patient. Of these 340 interventions, the medical team or patient agreed with 54%, 39% were not accepted and 6% had an unknown outcome.
The interventions were classified according to type as follows: 18% actual or potential adverse reaction, 14% each for supratherapeutic dose and untreated indication, 11% subtherapeutic dose and 10% each for improper administration, drug without indication and education provided to the patient.
The clinical significance mean scores were categorised as leading potentially to minor harm (<3)= 10%, moderate harm (3-7)= 89% and severe harm (>7)= 1%. Good agreement was observed between the two assessors (Pearson correlation coefficient = 0.97).

Conclusions
CP medication usage review in the day hospital has resulted in a positive contribution to the care of elderly patients. Opportunities to improve visibility of the service will be explored.

Introducing a HyperKALaemia Kit to facilitate safer management of Hyperkalaemia

Poster - Abstract ID: 77

Ms. Patricia O Brien [1]

1. *Galway University Hospitals*

Abstract

Introduction:
Previous measures to address deficiencies identified following incidents involving insulin overdose during treatment of hyperkalaemia were successful in improving nurse awareness of the importance of using insulin syringes. However, doctor awareness, although improved, remained below desirable levels, so other approaches to address this were needed.

This project built on previous work on development of hyperkalaemia guidelines to revise and finalise the guidelines and pilot them. A HyperKALaemia KIT was developed and piloted in conjunction with the guidelines.

Aim:
The aim of the project was to pilot a process in conjunction with clinical guidelines which would facilitate the prompt, safe and effective management of hyperkalaemia in GUH.

Methods:
Significant work had been done previously to draft detailed clinical guidelines on hyperkalaemia management previously but these had never been implemented. The guidelines were revised with extensive consultation.

A HyperKALaemia kit was devised, based on the Hypoglycaemia box introduced to GUH in 2015 and the Hyperkalaemia Kit developed for use throughout Northern Ireland[1](but with a decision to replace glucose 50% with glucose 20%). A policy and procedures for management and maintenance of the kit were developed in conjunction with the clinical guidelines. Intensive education sessions were undertaken before piloting the kit and guidelines on 3 wards (2 surgical and 1 medical).

Results:
An audit of hyperkalaemia management in November 2015 had been conducted prior to introduction of the kit and guidelines. Their success will be evaluated by re-audit of hyperkalaemia management and also by a survey of staff who used the kit and guidelines during the pilot.

Conclusion:
It is hoped that, following evaluation of the pilot and making any revisions arising from that, the kit and guidelines can be rolled out throughout the hospital

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Introducing a New Clinical Pharmacy Service to Care of the Elderly Patients in Beaumont Hospital

Poster - Abstract ID: 122

Ms. anne marie cushen [1], ***Mrs. Joanna Carroll*** [1], ***Mrs. Frances Maloney*** [1], ***Mrs. Mairi Donald*** [1], ***Ms. Ciara Reddy*** [1], ***Ms. Nuala Doyle*** [1]

1. *Pharmacy Department, Beaumont Hospital*

Abstract

Introduction: In 2015, a hospital improvement plan was developed to enhance Care of the Elderly (CoTE) services in Beaumont Hospital. Additional resources were provided to implement a clinically-focussed pharmacy CoTE service.

Aim/Objective: To develop a new service to improve the quality of pharmaceutical care received by CoTE patients.

Methodology: Key clinical pharmacy activities were identified from review of national and international geriatric models of care and methods for pharmaceutical care of older persons.[1-3] Dedicated clinical pharmacists were allocated to three critical points along CoTE patients' journey through Beaumont Hospital: A&E, the CoTE inpatient ward, and the Day Hospital. A novel "Frailty Assessment Tool" was used to identify at-risk CoTE patients, and to prioritise them for clinical pharmacy review. Quantity, types, and significance of CoTE clinical pharmacy activities were measured by prospective data collection.

Results: Since September 2015, frail CoTE patients undergo dedicated clinical pharmacy review in A&E to ensure an accurate medication history, and prompt, appropriate medication supply. A clinical pharmacist reviews inpatients on the acute CoTE ward, assessing the indication, effectiveness, dose, frequency, route, interactions, and duration of prescribed medicines. In the community, CoTE patients attending the Day Hospital undergo medication review and counselling by a clinical pharmacist.

To date (December 2016) approximately 1,500 CoTE patients have received clinical pharmacy input through the new service commencing in A&E. On analysis an average of 2 pharmaceutical issues, and 3.5 medication reconciliation issues have been identified per patient. Clinical pharmacy interventions were accepted by CoTE physicians in at least 48% of cases, with 15% averting severe harm.

Conclusion: Results demonstrate a significant pharmaceutical care burden in Beaumont Hospital's CoTE patients, and suggest the new service has been effective to date, both in addressing these issues and improving patients' quality of care. Ongoing work aims to maintain and expand the service.

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Introduction of an electronic ordering process for Parenteral Nutrition (PN)

Poster - Abstract ID: 43

Ms. Maria Creed [1], ***Ms. Mary Mckiernan*** [2], ***Ms. Emma Baker*** [1], ***Ms. Laura Dillon*** [1], ***Prof. Ciaran Meegan*** [1]

1. *Pharmacy Department, MMUH, Dublin,* ***2.*** *Department of Clinical Nutrition and Dietetics, MMUH, Dublin*

Abstract

Introduction PN is an invasive, specialised form of nutrition for the prevention / treatment of malnourishment in vulnerable patients[1]. The MMUH is one of eight designated cancer centres in Ireland and due to an increase in Gastrointestinal surgery is treating greater numbers of patients requiring PN. In 2016 there is a 47% rise in PN usage, leading to workload increase and time pressures for Pharmacists and Dietitians working on supply processes.

Aim/Objective
A collaborative review of the PN supply process, with view to removing bottlenecks and delays, simplifying communication and improving patient safety.

Methodology Multidisciplinary group formed which:

- Brainstormed ideas to identify bottlenecks and inefficiencies in communication
- Determined solutions for incremental trial
- Collected prospective data Sept - Nov 2016, pre and post intervention, on pharmacy time
- Circulated daily data for review
- Collaboratively agreed on process redesign

Results

- Initial process involved Dietitians sending paper prescriptions to Pharmacy, pharmacist prescription review, pharmacist electronic order generation and pharmacy call back to the Dietitian for verification.
- Re-designed process enables Dietitians to directly order PN electronically for each patient, removing a number of steps from the existing process.
- Data analysis using Excel® demonstrates a 57% reduction in PN supply time in Pharmacy, from 7 to 3 minutes per bag (mean of 100 bags / week).
- Dietitians report improved time management and satisfaction with process update.

Conclusion Introduction of a streamlined Dietitian electronic ordering process for PN has led to a saving of 400 minutes of Pharmacist time (0.18 WTE) per week. The updated process has led to the capacity to accommodate the increase in service use. Furthermore it has led to improved relations between Pharmacists and Dietitians, more time for communication on patient safety and stock management and less reliance on a person-dependent manual process which previously contributed to delay and staff stress.

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Introduction of an Electronic Parenteral Nutrition Ordering System in Cork University Hospital

Poster + Oral Presentation - Abstract ID: 113

Ms. Ciara O Riordan [1], ***Ms. Maeve Collins*** [2], ***Ms. Hilary Morton*** [3], ***Ms. Aine Connolly*** [4], ***Mr. John Froggatt*** [5], ***Ms. Deirdre Lynch*** [6], ***Dr. Suzanne Mccarthy*** [7], ***Ms. Annemarie Fanning*** [2]

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Abstract

Background

In Cork University Hospital (CUH), nursing staff were responsible for ordering parenteral nutrition (PN) for adult in-patients from the Pharmacy Department through written orders. However, the process was quite unwieldy. A new procedure was required to improve workflow.

Aim

To introduce and evaluate an electronic PN ordering process

Methods

A new process was proposed in which dietitians would take over responsibility from nursing staff for ordering PN. On getting approval from the Pharmacy and Dietetics Manager, meetings with the stakeholders were organised to map out the process and investigate the feasibility of the electronic ordering component. IT designed an electronic ordering system on iSOFT Clinical Manager. Education was provided to phlebotomy, nursing and medical staff on best practice for blood sampling to aid early reporting of results, improve blood result accuracy and to reduce the risk of central line infections. Training sessions and memos were provided prior to piloting which commenced on the 31st May 2016 on a surgical ward. Informal feedback was sought continuously throughout the pilot and necessary changes made. Post-implementation, a web-based questionnaire was circulated to stakeholders.

Results

The electronic PN ordering system was implemented on all wards on the 3rd October 2016. A total of 24 users participated in the survey. The majority (95.9%) of respondents agreed that the new system is a more efficient method. All respondents were happy with the training provided, and the majority (91.7%) of users were positive regarding communication on the new system.

Conclusion

A new electronic PN ordering system was successfully introduced in CUH in 2016. The response to the new system and the training/communication provided was very positive. This process improvement initiative involved close collaboration between pharmacy, dietetics, IT and nursing staff which should ultimately improve efficient delivery of care to adult in-patients requiring PN.

Key stakeholders and eHealth leads' perceptions, experiences, and vision towards the implementation of electronic systems for medicines in hospitals in Ireland: a qualitative study using Normalization Process Theory

Poster - Abstract ID: 62

Ms. Diana Hogan-Murphy [1], ***Dr. Antonella Tonna*** [2], ***Prof. Derek Stewart*** [2], ***Prof. Alison Strath*** [2], ***Dr. Scott Cunningham*** [2]

1. *University Hospital Galway (UHG); Robert Gordon University,* ***2.*** *Robert Gordon University*

Abstract

Introduction

Electronic systems for medicines have the potential to ensure continuous improvements in patient safety, efficiency, and effectiveness, and underpins organisational transformation and development [1].

Aim

To explore key stakeholders and eHealth leads' perceptions, experiences, and vision towards the implementation of electronic systems for prescribing, dispensing, and administering medicines in hospitals in Ireland.

Methods

Individual face-to-face semi-structured interviews were conducted with consenting participants from hospital, government, academic, and regulatory settings via purposive sampling. An interview schedule was developed by the research team using relevant literature and Normalization Process Theory (NPT). The schedule was subsequently reviewed by five experts and piloted with two healthcare managers. Interviews were audio-recorded, transcribed verbatim, and have been provisionally analysed using NPT constructs and the framework method. Data management was facilitated by NVivo 11. All data were anonymised, coded, and securely stored. Ethical approval was received from a UK university and the Royal College of Physicians of Ireland.

Results

Sixteen out of 19 interviewees consented: eight hospital leads, four government leads, two professors in academia, and two doctors in regulatory affairs. Participants understood the value of system implementation to facilitate patient safety, quality, and efficiency, and perceived engagement and feedback were central to success. Sharing learning experiences, robust contingency plans, and measuring practices were also considered significant. A shared sense of purpose varied from positivity with various national eHealth initiatives and standards to a perception of gaps in leadership and understanding. Challenges included resistance to change, managing expectations, fear of technology, resource constraints, lack of decision making and stakeholder engagement, and concerns around legislation, data protection and patient consent.

Conclusion

This theoretically-based qualitative research identified many key and potentially generalisable facilitators and barriers to implementation and concur with other work [2]. Findings will facilitate better implementation planning for medication related eHealth systems in hospitals.

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Key stakeholders' perceptions towards the implementation of electronic systems for prescribing, dispensing and administering medicines in three hospital settings in Ireland: a theory-based qualitative study

Poster - Abstract ID: 120

Ms. Diana Hogan-Murphy [1], ***Dr. Antonella Tonna*** [2], ***Prof. Derek Stewart*** [2], ***Prof. Alison Strath*** [2], ***Dr. Scott Cunningham*** [2]

1. *University Hospital Galway (UHG), Robert Gordon University,* ***2.*** *Robert Gordon University*

Abstract

Introduction

eHealth solutions have the potential to enhance patient safety and improve the quality and efficiency of healthcare delivery [1].

Aim

To explore key stakeholders' perceptions towards the implementation of electronic systems for prescribing, dispensing and administering medicines in three hospital settings in Ireland.

Methods

Individual face-to-face semi-structured interviews were conducted with consenting nursing, pharmacy, medical, and information technology staff in three general hospitals in Ireland via purposive sampling. An interview schedule was developed by the research team using relevant literature and Normalization Process Theory (NPT). The schedule was subsequently reviewed by five external experts and piloted. Interviews were audio-recorded, transcribed verbatim and have been provisionally analysed using NPT constructs and the framework approach to content analysis. Data management was facilitated by NVivo 11 software. All data were anonymous, coded independently and securely stored. Ethical approval was received from a UK university and all participating hospitals.

Results

Twenty-three interviews were conducted with senior and junior staff: nine nurses, four pharmacists, two pharmacy technicians, six doctors, and two IT professionals. Provisional analysis identified key facilitators to include enhanced patient safety, improved stock control and efficiency, cost effectiveness, good team leadership and support, and promotion of benefits. Barriers included operational concerns such as accessibility, workflow issues, and system circumvention, resistance to change, time pressures, resource constraints, and lack of management involvement and support. Nurses with more experience of system implementation felt a stronger sense of acceptance. Interviewees also expressed a need for improved organisational dynamics, piloting, auditing of impact, and management of expectations prior to implementation.

Conclusion

It is important to review operational aspects and involve end users to promote cognitive participation and successful adoption. Many key facilitators and barriers have been identified and concur with the work of others [2]. This will assist organisations to better plan for system implementation.

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Learning from Medication Errors in the Pharmacy Aseptic Unit to Inform Change and Prevent Harm

Poster - Abstract ID: 11

Mrs. Louise Byrne [1], ***Mr. Terry Smeaton*** [1]

1. *Tallaght Hospital*

Abstract

Introduction

The preparation of medicines in the Aseptic Unit (AU) is a high risk process, with considerable potential for medication error and patient harm. Errors which occur in Tallaght Hospital AU are logged monthly on a specially-designed Microsoft Excel database by a senior Pharmaceutical Technician. An error report is compiled annually based on the previous year's data as recommended by H/PICs.

Aim

Compile the annual error report for Tallaght Hospital AU for the year 2015 and implement recommendations arising.

Method

The report was compiled according to an in-house SOP. The results were disseminated at the monthly AU staff meeting and to senior Pharmacy management. Recommended changes were implemented.

Results

846 errors were reported in 2015 (+46% from 2014). Errors occurred most commonly at the 'Tray Set Up' (288) and 'Processing' (170) steps. 10 AU errors were detected at ward level. These related to distribution(3), handover(3), labelling and packaging(2), processing(1) and equipment(1). The monthly error reporting rate fluctuated in line with staff changeovers and training. Fluorouracil, Ambisome®, Azacitidine and Cyclophosphamide products were most commonly associated with error. 99% of reported errors did not reach the patients, and no errors resulted in harm.

Changes Arising:

- To reduce Ambisome® processing errors, the CliniChemo® preparation method and Drug Training List for this product were updated.
- To reduce Azacitidine and Paclitaxel errors at 'Tray Set Up', additional competency training is now provided.

Conclusion

Errors in the AU continue to rise annually in line with activity. This may reflect improved error reporting practice, or an increasing incidence due to frequent AU staff changes. Efforts are ongoing to further reduce errors at each step of the preparation process. The vast majority of reported AU errors do not reach the patient. The effectiveness of changes made this year will be analysed in 2017.

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2012	2013	2014	2015	Total
5-FU	5-FU	5-FU	5-FU	5-FU
Azacitidine	Folinic Acid	Azacitidine	Ambisome®	Azacitidine
Folinic Acid	Azacitidine	Cyclophosphamide	Azacitidine	Cyclophosphamide
Rituximab	Infliximab	Trastuzumab	Cyclophosphamide	Infliximab
Cyclophosphamide	Rituximab	Oxaliplatin	Trastuzumab	Rituximab
Infliximab	Oxaliplatin	Rituximab	Infliximab	Trastuzumab
Trastuzumab	Cyclophosphamide	Paclitaxel	Oxaliplatin	Oxaliplatin
Epirubicin	Gemcitabine	Infliximab	Paclitaxel	Folinic Acid
Pemetrexed	Epirubicin	Gemcitabine	Rituximab	Ambisome®
Bortezomib	Irinotecan	Carboplatin	Etoposide	Paclitaxel

Top 10 drugs associated with erro in 2015.png

Local baseline audit of methadone prescribing in Kings College Hospital – Denmark Hill Site

Poster - Abstract ID: 126

Ms. Aisling Beakey [1]

1. *Pharmacy Department, Mater Misericordiae University Hospital (MMUH)*

Abstract

Introduction: Opioids are high risk drugs[1, 2, 3] with previous reports of patient harm and adverse events involving methadone within the trust. A trust guideline[4] exists to support appropriate methadone prescribing.
Aim/Objective: To measure adherence to the methadone prescribing guideline. Target was 100% compliance due to the high associated risk. Information on naloxone prescribing was also collated.
Methodology: This was a retrospective audit of all patients prescribed methadone from January - April 2015. Ethics approval was not required and trust approval was granted. A data collection tool was developed and piloted. Data from the electronic prescribing system (EPMA) was analysed using Excel. Adherence with 8 standards relating to methadone therapy was measured. Analysis was tailored according to whether the patient was on opioid substitution therapy (OST) on admission or not.
Results: A total of 91 patients were reviewed - 76% were on OST on admission and 17% were not, or it was unknown (7%).
None of the standards were fully met (see table).
Naloxone prescibing:
- 19% (*n*=17/92) of patients were prescribed and 4 received naloxone
- 38% (*n*=8/21) of patients newly started on methadone were not correctly titrated. Only 25% (*n*=2/8) of these were prescribed naloxone, despite being at increased risk of overdose. None received a dose.
Conclusion: Adherence to guideline standards is poor, which poses a risk to patients and highlights a lack of prescriber awareness around appropriate methadone prescribing. Poor communication with patients' keyworkers at admission and discharge may disrupt continuity of care for patients.
Adherence to the guideline may be improved through education and development of new functions for EPMA such as:

- Direct link to guideline
- Electronic flag to prompt confirmation of the dose before administration
- A standard order set (i.e. clinical decision support tool) for methadone titration

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Standard		Target	Result
For patients on an opioid substitute therapy (OST) programme in the community			
1	A reliable drug history is obtained before prescribing OST	100%	36%
2	Drug history is confirmed during the inpatient stay	100%	30%
3a)	If the last OST dose was taken within 72hours prior to admission, the same dose is continued	100%	87%
b)	If the patient has missed ≥ 3 days of OST, they are re-titrated as per guideline	100%	29%
4	If the pre-admission dose is correctly continued, it is prescribed in two divided doses	100%	20%
5	The patient's OST prescribing agency is contacted at admission and discharge	100%	9%
For patients not currently on OST in the community (or confirmation not possible)			
6	An appropriate titration regimen is prescribed as per guideline	100%	59%
7	A 'substance misuse nurse' referral is done	100%	73%
8	Patients still withdrawing are managed appropriately as per guideline	100%	89%

Methadone audit results table.png

Making Insulin administration safer – eliminating errors in hyperkalaemia treatment

Poster - Abstract ID: 76

Ms. Patricia O Brien [1]

1. *Galway University Hospitals*

Abstract

Introduction:
Insulin is a High Alert medicine[1]which has the capacity to cause serious or fatal patient harm in the event of error. A key recommendation to minimise the risk of error and patient harm is ensuring use of an appropriate "insulin" syringe.[2, 3, 4]

Failure to use an insulin syringe was a key contributing factor to incidents involving insulin overdose during treatment of hyperkalaemia in GUH. Follow-up incident investigation revealed:

- Poor ward storage; syringes were often not segregated, had poor or no labelling, and were difficult to find
- Low awareness and poor understanding about insulin syringes and the importance of using them

Aims:

The aims of the project were to improve awareness about the use of insulin syringes and improve ward storage so that insulin syringes were readily located.

Methods:

A project team was set up and two main strands of action were pursued:

1. Promoting awareness of the importance of using insulin syringes when drawing up insulin doses from vials, using ward posters, staff awareness and education sessions, and a competition
2. Making insulin syringes distinctive and easy to find by labelling and segregation

The effect of these actions was assessed by monitoring staff awareness, monitoring how well syringe segregation and labelling was sustained, and evaluating blood glucose levels in patients treated for hyperkalaemia.

Results:
Segregation and labelling of syringes was generally successful and well sustained. Nurse awareness was high but, while doctor awareness improved by over 100% from baseline, it remained below desirable levels. No insulin overdose was detected in any of the 13 wards involved in project.

Conclusion:

Syringe storage was greatly improved although lack of homogeneity prevented standardization. There were high levels of nurse engagement and awareness. However, doctor awareness remains quite low and other approaches are now being considered to address this.

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Medicines reconciliation in an ICU

Poster - Abstract ID: 96

Mrs. Mary O Sullivan [1], ***Ms. Claire Mullins*** [1], ***Ms. Annette Gerety*** [1], ***Mr. Dennis Wedgeworth*** [1]

1. *St Vincent's University Hospital*

Abstract

Introduction:Transitions in care are vulnerable periods for patients during hospitalisation, with more than 50% of medication errors occurring at this point[1]. ICU patients had higher rates of discontinuation of chronic medications compared to control groups in a study conducted by *Bell et al.*in 2011 [2.] It was also estimated that 33% of patents had unintentional withdrawal of at least one chronic medication at ICU discharge. [3]
Aim:The aim of this initiative was to develop an ICU medication reconciliation form which was embedded into the Metavision® software and available for all healthcare professionals. The form was completed by the pharmacist who tries to obtain the best possible medication history.

Method:A Trinity Hospital Pharmacy Masters student developed the form in conjunction with the ICU pharmacist. The SVUH medication reconciliation format [4],electronic resources[5] and templates from Irish [6] and NHS hospitals[7] were used to design the medicines reconciliation form.The clinical information nurses then adapted it for use on Metavision®.

Result:The form is now available on all patients in ICU with its own bright green 'Pre-admission medication' tab on the front screen. The form is printed out and filed in the prescribed medication section of the healthcare record when relevant. The form is also printed as part of the discharge information from ICU.

Conclusion:The medication reconciliation form has helped to clarify patient's medication history. It highlights if patients were on anticoagulants, steroids or insulin which are important to continue after discharge. ICU specific medications e.g PPIs for stress-ulcer prophylaxis, nebulisers or medications for delirium are often continued inappropriately post ICU discharge. These can be safely discontinued by checking first if there was a previous indication for them on the medication reconciliation form.

This initiative has highlighted the need to review medication history particularly pre-discharge.

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Migrating to the NCCP Fluorouracil (5-FU) Pump Dose Bands in Tallaght Hospital

Poster - Abstract ID: 46

Mrs. Louise Byrne [1], ***Ms. Felicity Mc Donnell*** [1], ***Mr. Seamus Dunne*** [1]

1. *Tallaght Hospital*

Abstract

Introduction

Tallaght Hospital have been dose banding 5-FU pumps since 2011. These pumps were outsourced to an external compounding facility and supplied as stock items. In response to an outsourcing capacity issue the NCCP issued national guidelines for dose banding in late 2015. To alleviate pressure the external compounding facility outsourced these bands to their UK facility. This required a change in dose bands, pump size, concentration of fluorouracil and type of diluent used in Tallaght Hospital.

Aim

To outline the changes and resources required to implement the NCCP 5-FU pump dose bands.

Methodology

A change control form was introduced to consider the following:

- Impact Assessment
- Documentation
- Training
- Equipment
- Post Change Monitoring

Results

The NCCP Fluorouracil pump dose bands were introduced on 24/10/16. 5 bands were outsourced and remaining bands prepared in house.

Old dose band stock levels were reduced, however €1000 worth of stock was still unused by the implementation date.

35 documents were updated and this took 38 hours over 3 months to complete. 3 pharmacists were involved.

Training for pharmacy, nursing, medical and patients was completed via demonstration and/or by reading change control documents.

The post change monitoring period highlighted issues with the yellow colour packaging of the outsourced dose bands. This is contrary to NCCP recommendations for Systemic Anti-Cancer Therapy and feedback has been given to the external compounding facility.

The shelf lives of the outsourced dose bands range from 21-45 days, old bands had 45 days. Outsourced dose band ranges have been reduced from 5 to 4 and stock levels adjusted to prevent wastage.

Conclusion

Migration to NCCP 5-FU pump dose bands was successful. This required 3 months and 38 man hours to implement. Stock levels and outsourced bands need to be carefully selected to avoid wastage. Patients and staff are satisfied with the change.

References

NCCP Guidance Document-Dose Banding for Systemic Anticancer Therapy (SACT)

Moving to outpatient treatment of moderate multiple sclerosis (MS) relapses

Poster - Abstract ID: 48

Mr. Ciaran Muldowney [1]

1. *St Vincent's University Hospital*

Abstract

Introduction

The standard treatment for a relapse of MS is intravenous methylprednisolone 1g once daily for 3 days. To reduce inpatient admissions and provided that the patient is sufficiently well, patients may be treated on an outpatient basis. For 3 consecutive days, the patient will be required to return to hospital and receive IV methylprednisolone. This creates a number of difficulties for these patients as they may live a considerable distance from the hospital and their mobility is often impaired. A randomised, double-blind trial published in 2015 showed that administering the same dose of methylprednisolone by the oral route was non-inferior to IV administration for the treatment of relapses[1].

Aim

The aim of this initiative was to introduce a procedure for the supply of oral methylprednisolone tablets to patients and keep patient records for later analysis.

Methods

Oral methylprednisolone tablets are unlicensed in Ireland and are not covered by any reimbursement schemes. A published pharmacoeconomic analysis[2] was used to demonstrate an overall cost saving if the hospital supplied the medicine. Based on hospital data, approximately 15-25 packs would be used each year by the Neurology Department. Pre-printed labels with dosage instructions were prepared and tablets were dispensed in packs of 30. A short education session was given to the neurology multidisciplinary team, along with written instructions on the procedure and what details to record.

Results

Eligible patients began to receive treatment with oral methylprednisolone in September 2016. Details for treated patients are returned to the pharmacy department and filed. At one year post-implementation, the number of patients that received treatment and their level of disability at the point of relapse will be reviewed.

Conclusion

This initiative demonstrates how high quality clinical trial evidence can be put into everyday use to benefit patients and decrease overall hospital workload.

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Multi-factorial approach to improve uptake of pharmacist-led fall's risk medication review recommendations

Poster - Abstract ID: 108

Ms. Niamh McMahon [1], ***Mr. Bernard Carr*** [2], ***Ms. Aoife O Reilly*** [3]

1. *St.James's hospital/Trinity College Dublin,* ***2.*** *St. James's Hospital, Dublin,* ***3.*** *St.James's hospital*

Abstract

Introduction: Falls are costly, both financially and for patient morbidity and mortality (1). Falls are multi-factorial (2,3) & medications are an important extrinsic risk factor for falls (4). A baseline audit found uptake by doctors of pharmacist fall's risk medication recommendations to be poor.

Aim (s):

- To increase uptake of pharmacist-led recommendations through multi-factorial interventions.
- To assess:
  - time taken to complete falls medication review.
  - if written &/or verbal communication of recommendations was most effective.

Methods: Clinical audit with multi-factorial interventions:

a. Orange 'falls alert' stickers adhered to the prescription chart. Orange colour chosen to match falls alert posters and wrist bands in the hospital.

b. Medication and falls risk guidance document, detailing medications which carry the highest risk, plus the need for bone protection in at-risk patients. Guidance recommends: stopping the medication, reducing the dosage or prescribing a safer alternative, where possible.

c. Dissemination of guidance document via Hospital Prescriber's Capsule & intranet & by email to doctors.

d. Education sessions for pharmacists & nurses on participating wards.

Pharmacists conducted medication reviews over three weeks on 3 wards (two medical & one surgical), on patients at falls risk or who had a recent fall.

Results:41.8% increase in uptake of pharmacist recommendations by prescribers. 41.9% of recommendations related to benzodiazepines and 'Z-drugs' (zopiclone and zolpidem). 100% uptake of bone protection recommendations. Average time to complete/document a fall's medication review was ~11 minutes (range 3-22 minutes) & excluded time taken for verbal communication with prescribers. Uptake of recommendations was 0% if verbal communication did not take place

Conclusions: Multi-factorial interventions successfully increased uptake of pharmacist medication review recommendations & of bone protection. Verbal communication was critical for uptake. Time taken to complete reviews may prevent widespread hospital rollout. Sustainability of changes made depends on good communication to primary care.

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People Ageing with Intellectual Disabilities in a Residential Care Community: The Pharmacist and Accessible Health Promotion and Medicines Information.

Poster - Abstract ID: 102

Dr. Bernadette Flood [1]

1. *Daughters of Charity Disability Support Services*

Abstract

Introduction

People ageing with intellectual disabilities (PAWID) have a right to be involved in decisions about their health, healthcare and medicines use. The onsite pharmacist identified a need for health promotion group sessions and individual person centred medication information sessions. (n=104).

Aim of this ongoing project

To improve the quality of pharmaceutical care provided to PAWID living in residential care.

Method

Initiative 1:Health Promotion Group sessions: Topics chosen by the group of people with mild, moderate and severe intellectual disabilities (ID): Brain Health, Falls, Medicines Use etc. Audience numbers range from 25-35 PAWID. The slides have pictures of places and objects familiar to the audience.

Initiative 2:Medicines Information sessions:The pharmacist provides person centred medicines information sessions: foster exchange of information and a sense of "partnership" between the pharmacist and the person ageing with ID and/or their support staff.

" *Bernadette, I don't like how those tablets make me feel*".

Results

Health Promotion Group sessions: The sessions are highly interactive, allow for peer learning and have been refined over a number of years.*" Thanks for telling us. We need to know*"

Medicines Information sessions:Consent is obtained from the person with ID. The person provides their signature, thumb print or mark. Sessions focus on some aspect of medicines use. The pharmacist provides verbal information and also written accessible information on health promotion and / or medicines use. "*When will you be coming to me again? "*

Conclusions

This vulnerable population may be 'hard to hear' in the medication use process. To promote medication safety PAWID must be included as active partners in their healthcare. This initiative improved relationships and communication across care areas

Pharmacist-led investigation into the experience of antipsychotic side-effects, the distress they cause and how they are reported

Poster - Abstract ID: 64

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Abstract

Antipsychotic medicines can be of great benefit in many mental health disorders. However, they are associated with side-effects which may cause suffering/stigma, lead to physical morbidity and result in poor adherence[1,2]. Data on the incidence and frequency of antipsychotic side-effects is available from a range of sources which makes obtaining reliable estimates of the relative risk of specific side-effects difficult[3]. Additionally, clinician-opinion and patient-reporting of side-effects may not accurately reflect side-effects experienced or the distress they cause[3-8].

Perceptions of the side-effect profiles of different antipsychotics and the distress they cause are a major influence on antipsychotic choice[3]. In order to facilitate informed prescribing decisions, both clinician and patient must be aware of the side-effect profiles of antipsychotics and the distress they cause[1,9,10]. There is therefore a need for real-life data on the experience of antipsychotic side-effects.

To use validated rating scales to gather real-life gather on antipsychotic side-effects experienced, to establish distress caused and to determine whether patients are spontaneously reporting them to clinicians.

Inpatients taking antipsychotics were systematically assessed for side-effects by the pharmacist using a validated rating scale.

99 patients participated in the study. The most commonly prescribed antipsychotics were olanzapine (45%), quetiapine (19%) and risperidone (12%).

The most commonly reported side-effect was daytime drowsiness (81%) with polyuria/polydypsia (59%) and weight gain (55%) reported by more than half of participants. Erectile dysfunction and weight gain (14%) were the most distressing side-effects.

Only 27% of participants had reported side-effects to their clinician.

This study investigates the real-life experience of antipsychotic side-effects which may be used to guide choice of medication. It also highlights those side-effects that cause distress and may lead to poor adherence. These results support the need for systematic enquiry given the large proportion of participants (73%) who had not previously spontaneously reported side-effects to their clinicians.

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Pharmacological guidelines for schizophrenia: a systematic review and comparison of recommendations for the first episode.

Poster - Abstract ID: 88

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Abstract

Objectives

Clinical practice guidelines (CPGs) support the translation of research evidence into clinical practice. Key health questions in CPGs ensure that recommendations will be applicable to the clinical context in which the guideline is used. The objectives of this study were to identify CPGs for the pharmacological treatment of first-episode schizophrenia; assess the quality of these guidelines using the Appraisal of Guidelines for Research and Evaluation II (AGREE II) instrument; and compare recommendations in relation to the key health questions that are relevant to the pharmacological treatment of first-episode schizophrenia.

Methods

A multidisciplinary group identified key health questions that are relevant to the pharmacological treatment of first-episode schizophrenia. The MEDLINE and Embase databases, websites of professional organisations and international guideline repositories were searched for CPGs that met the inclusion criteria. The AGREE II instrument was applied by three raters and data extracted from the guidelines in relation to the key health questions.

Results

In total, 3299 records were screened. Ten guidelines met the inclusion and exclusion criteria. Three guidelines scored well across all domains. Recommendations varied in specificity. Side effect concerns, rather than comparative efficacy benefits, were a key consideration in antipsychotic choice. Antipsychotic medication is recommended for maintenance of remission following a first episode of schizophrenia but there is a paucity of evidence to guide duration of treatment. Clozapine is universally regarded as the medication of choice for treatment resistance. There is less evidence to guide care for those who do not respond to clozapine.

Conclusions

An individual's experience of using antipsychotic medication for the initial treatment of first-episode schizophrenia may have implications for future engagement, adherence and outcome. While guidelines of good quality exist to assist in medicines optimisation, the evidence base required to answer key health questions relevant to the pharmacological treatment of first-episode schizophrenia is limited.

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Potentially Inappropriate Prescribing of Proton Pump Inhibitors – A Qualitative Review

Poster - Abstract ID: 107

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Abstract

Introduction

Proton pump inhibitors (PPIs) are potent gastric acid suppressants, used to treat a range of gastric disorders. Concerns about potentially inappropriate prescribing of PPIs, and resultant cost implications, are well documented (1). Potential serious adverse effects are associated with high dose, long-term treatment (2).

Aims

To explore reasons for potentially inappropriate prescribing (PIP) of PPIs in the Medicine of the Elderly Directorate (MedEl) in St.James's hospital.

Methods

An online survey was issued to 23 MedEl doctors, including questions on indications, side-effects, and prescribing practices relating to PPIs.

Results

Response rate was 52% (12 respondents). 80% considered PPIs to have a high safety rating of 4 or 5, out of 5. The most recognised adverse effects were hypomagnesaemia (83%), *Clostridium difficile* infection (67%) and increased fracture risk (58%). Knowledge of possible drug interactions was low, except for clopidogrel (92%). Documentation of indication for newly prescribed PPIs on discharge was 25%, but duration of therapy was higher (58%), particularly if noted on oesophago-gastro-duodenoscopy (OGD) report. Many chose long term therapy for inappropriate indications. Most opted not to stop PPIs in patients with recognised adverse effects of PPI therapy.

Conclusions

Lack of awareness of adverse effects & dosing recommendations exist among MedEl doctors. Measures to address this should include: education of prescribers, production of dosing guidelines and a deprescribing algorithm & increased detail in OGD reports.

References

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Preventing Clots,Saving Lives-The Journey of Venous Thromboembolism Prophylaxis in St. James's Hospital 2009-16

Poster - Abstract ID: 82

Mr. Bernard Carr [1], ***Ms. Eileen Relihan*** [1]

1. *St James's Hospital,Dublin*

Abstract

Introduction

Venous thromboembolism (VTE) prophylaxis is a key strategy in reducing preventable deaths in medical inpatients. [1,2] The measurement of compliance rates with VTE prophylaxis guidelines has been led and monitored by the Pharmacy Department in St James's Hospital (SJH) since 2009. Key steps introduced since 2009 include; VTE prophylaxis guidelines, a decision algorithm and pre-printed prescription in the inpatient drug chart, a focus on training of Pharmacy and Medical teams and a continued cycle of audits.

Aim/Objective

To review if the steps introduced by the Pharmacy Department have led to sustained rates of appropriate VTE prophylaxis in medical patients.

Method

A VTE audit was undertaken in May 2016 and results evaluated and compared to five previous audits from 2009-2015.

Results

In May 2016,data on 415 medical patients was collected and reviewed with the Medication Safety Facilitator.The results demonstrated a high level of compliance (93%) with guidelines for VTE prophylaxis. In addition 15 cases involved successful pharmacist intervention to adjust treatment in line with recommended practice.

The results continue the positive trend of adherence to best practice for VTE prescribing in medical inpatients in SJH. The level of compliance recorded in previous audits was: year 2009- 39%, 2010- 57%, 2011- 63%, 2013- 89%, 2015- 79% and May 2016- 93%.

Conclusion

These initiatives have been appropriately focused for staff delivering care to medical inpatients and the level of compliance compares very favourably with published international rates.[1,2]It is intended to continue the series of audits as part of joint Medication Safety and Pharmacy department safety metrics. The safety measures should also be replicated within the E-prescribing system which is planned for implementation in the hospital.

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Readiness to Implement Barcode Medication Administration: A Neonatal Unit Case Study

Poster - Abstract ID: 123

Ms. Sarah Fenton [1]***, Dr. Brendan Murphy*** [2]***, Ms. Annette Mcelligott*** [3]

1. *Pharmacy Department, Cork University Hospital, Wilton, Cork,* ***2.*** *Department of Neonatology, Cork University Maternity Hospital (CUMH),* ***3.*** *Department of Computer Science and Information Systems, University of Limerick*

Abstract

The HSE have estimated that there could be up to three million medication errors in Irish public hospitals each year(1). While not all medication errors lead to adverse drug events, in 2012 the Clinical Indemnity Scheme managed by the State Claims Agency reported that medication-related incidents are the highest category of clinical incidents at 7.8%(2). Neonatal patients are particularly vulnerable to medication errors with high personal and organisational costs(3). Barcode Medication Administration (BCMA) systems are an evidenced based approach to reducing medication administration errors, which are the errors that lead to most patient harm(4). Implementation is widespread in the US and increasing across Europe, however use in Irish public hospitals is currently uncommon(5). BCMA is part of the eHealth Ireland vision for Closed Loop Medication Management in Irish hospitals(6).

To identify and document any gaps in the capability of an Irish hospital to implement BCMA.

A qualitative mixed method approach was taken. This comprised of a multidisciplinary assessment of organisational readiness to implement BCMA in the neonatal unit of Cork University Maternity Hospital, a literature review and a site visit to an Irish hospital that has implemented BCMA.

There are gaps in our hospital's capability to implement BCMA. These include:

a) Lack of nursing and pharmacy informatics staff in appropriate roles within the hospital.

b) A hospital pharmacy service model for the supply of neonatal medications that does not support BCMA implementation.

c) A hospital pharmacy information system which is not interoperable with other hospital information systems.

d) A lack of established medication interoperability standards such as national drug file.

The widespread successful adoption of BCMA across Europe and the US should be explored to develop a national migration path for overcoming the identified gaps to implementing BCMA as an important patient safety technology in Irish public hospitals.

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Remote temperature monitoring system for all medication fridges in St.Vincent's University Hospital

Poster - Abstract ID: 86

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1. *St Vincent's University Hospital*

Abstract

Introduction

Medicines should be stored under conditions which ensure that their quality and stability are maintained until the point of administration to the patient.

Aim

To provide a service where medication fridge temperatures are monitored continuously and corrective actions taken, if required, in order to ensure the quality and stability of medications intended for patient use.

Method

Kelsius is a remote wireless temperature monitoring system. Sensors placed in fridges, incubators and freezers throughout the hospital monitor temperature. Network controllers, which can only be accessed by trained members of staff are located at staff bases and display information from the sensors. A pharmacy staff member receives temperature alerts to a designated mobile phone during working hours and an assistant director of nursing receives alerts out of hours.

A policy for the remote temperature monitoring was developed with roles and responsibilities defined for working hours and out of hours.

Results

Prior to the installation of remote the wireless system, nurses were responsible for manually monitoring fridge temperature on a daily basis. As all areas in SVUH do not have twenty four hour cover, fridges in certain area were not monitored out of hours.

All fridges, freezers and incubators in SVUH are now monitored on a continuous basis and alerts acted on immediately. Alerts received on Kelsius system are stored on Kelsius email and corrective actions for each alert received entered on the Kelsius website. On average we receive twenty temperature alerts per week and the most common alert received is the fridge door has not been closed properly.

Conclusion The Kelsius system has ensured rapid response to deviation from recommended storage conditions and has provided important data about fridges and allows trends to be identified.

Reserve to preserve? A cohort study of meropenem use in a Model 3 public hospital with limited access to a Consultant Microbiologist

Poster - Abstract ID: 40

Dr. sile o connor [1], ***Mr. Paul Doolan*** [1], ***Prof. Philip Murphy*** [1], ***Dr. Abdul Monem*** [1], ***Dr. Tauseef Ghaffer*** [1]

1. *University Hospital Kerry*

Abstract

Introduction:
At University Hospital Kerry (UHK) meropenem is restricted to use on the advice of a Consultant Microbiologist[1] in line with national HSE recommendations[2,3]. During 2016 UHK had limited access to a Consultant Microbiologist. This study monitored all meropenem use at UHK over a 13 week period when changes were taking place in the provision of Consultant Microbiologist cover.

Aims/Objectives:

1. Monitor the frequency of meropenem use.
2. Explore antimicrobial treatment pathways with meropenem.
3. Review indications and diagnoses for meropenem use.
4. Investigate treatment outcomes following meropenem use.

Methodology:

1. A data collection tool was developed.
2. A multidisciplinary data collection team was formed.
3. Patients were identified as meropenem was requisitioned from Pharmacy.
4. Prospective data were collected.
5. The Consultant Microbiologist reviewed the data where appropriate.
6. Anonymised data were analysed using Excel.

Results

1. An average of 8 patients per month commenced meropenem, with a higher figure when Consultant Microbiologist cover was reduced.
2. All patients were initially treated with first and/or second line antibiotics.
3. Seventy percent recovered.
4. The average age of those who died was 82 years.
5. All who died were being treated for respiratory infection.
6. Four who died did not have Consultant Microbiologist input, including two of the three non-palliative patients.

7. Sixty percent of those who died without Consultant Microbiologist input commenced meropenem in September 2016.
8. Two thirds of those who died were palliative patients.
9. No palliative patient survived.

Conclusions

- Meropenem always represented an escalation in treatment.
- It showed a 70% recovery rate.
- Poorer outcomes were associated with palliative status, increased age and respiratory infection.
- Increased meropenem use and poorer clinical outcomes may be associated with reduced access to a Consultant Microbiologist.
- Findings highlighted the need for best practice guidelines in the use of meropenem in palliative patients.

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3. Communication to Hospital Management, UHK from Dr. Colm Henry , National Clinical Advisor and Group Lead – Acute Hospitals regarding (2) above.

Returned Medication: An Opportunity for Enhanced Medicines Review in an Extended Care Setting

Poster - Abstract ID: 29

Ms. Ciara Mc Gann [1], ***Ms. Claire Kavanagh*** [1], ***Ms. Eimear O Dwyer*** [1]

1. *Our Lady's Hospice & Care Services, Harold's Cross*

Abstract

Background:
An individual resident dispensing system is in place for four wards in an extended care unit in Our Lady's Hospice & Care Services, Harold's Cross. Unused medicines are returned to the pharmacy department at the end of each month. These items represent medicines which have not been administered. Reasons for non-administration of dispensed medications can vary; there can be prescription alterations or residents may be on leave, however there is also the potential for undetected administration errors.

Methods:
Details of returned medicines were collated, over a one year period, and reviewed to assess the value of analysing returned medicines as a method of improving medicines management and the overall pharmaceutical care of residents. Nursing, medical and pharmacy staff collaborated to address problems identified.

Results:
Over a one year period, medicine was returned from 4.5% of total dispensing episodes (336/7024).

Resident adherence difficulties were found to be most commonly associated with non-administration accounting for 22.7% of returns. Other reasons for return of medications included resident on leave (18.6%), medication discontinuation (9.7%), dose reduction (9.2%), resident unable to receive medication (7.5%). A reason was unidentified in 14.5% of instances, which represents the potential for undetected administration errors.

51% (172/336) of returned items required follow-up with nursing staff. The most common issues necessitating follow up with nursing staff were associated with administration (50%) and documentation of non-administration (30%).

Follow-up discussion with medical staff was deemed necessary in 37% (124/336) of instances.

Conclusion:
The process of analysing returned medicines offered an insight into medication use and identified issues relating to resident adherence and documentation of non-administration of medicines. In addition, this process identified probable administration omission errors which were previously undetected. It provides an opportunity for collaborative working between medical, nursing and pharmacy staff to improve medicines management.

Role of the Pharmaceutical Technician in Error Management in the Aseptic Unit

Poster - Abstract ID: 10

Ms. Laura Slevin [1], ***Mrs. Louise Byrne*** [1]

1. *Tallaght Hospital*

Abstract

Introduction
In the Aseptic Compounding Unit in Tallaght Hospital, errors are recorded manually in a folder which are then transferred by a Pharmaceutical Technician onto an excel error database. The use of pivot tables facilitates data analysis such as types of errors and detection points. This data is presented to staff in the Aseptic Unit on an annual basis.

Aims
To up skill the designated Pharmaceutical Technician to manage the error database.
To increase awareness of the errors occurring in the Aseptic Compounding Unit.
To improve the quality of error documentation.

Methodology
Standard Operating Procedures were developed by a Pharmacist to outline data entry and data analysis.
Time was spent with the Pharmacist getting to know the excel system.
An introductory microsoft excel course was completed by the Pharmaceutical Technician.
The Pharmaceutical Technician was allocated a slot at the monthly meeting to discuss errors.

Results

Standard Operating Procedures were further updated to outline the role of the Pharmaceutical Technician in error management.
Error log forms were updated in the folder to provide further information when inputting data.
Familiarity with the data base allowed the presentation of errors at the monthly Aseptic Unit meeting, for example drugs associated in most errors.
Familiarity with microsoft excel will allow for the preparation of 2017 annual error report, a role formerly completed by a Pharmacist.
Conclusion
By upskilling the Pharmaceutical Technician to this role, it allows more timely management of the error database.
Communication of errors at the Aseptic Unit monthly meeting highlights to staff the type of errors occurring and the importance of documentation.
Regular analysis of the error database can identify areas in which errors frequently occur and present opportunities for process improvement.
The Pharmaceutical Technician role has enhanced the management of errors in Tallaght hospital Pharmacy Aseptic Compounding Unit.

Sharing the Cardiology Triple Therapy Plan

Poster - Abstract ID: 109

Ms. Evelyn Deasy [1], ***Ms. Edwina Morrissey*** [1], ***Ms. grace power*** [1]

1. *Tallaght Hospital, Dublin*

Abstract

Introduction: Cardiovascular patients with an indication for triple therapy with anticoagulant and dual antiplatelet therapy pose patient safety concerns about bleeding risk. Tallaght Hospital Medicines Guide 2016-17 recommendations to safely manage triple therapy include:

- avoid Prasugrel or Ticagrelor;
- target INR of 2-2.5 for warfarin;
- lower licensed doses of DOACs;
- gastric protection;
- limit duration (typically 6 weeks);

Aim: To develop a methodology to share the complex cardiology triple therapy plan with the patient and multiple heath care professionals in the hospital and the community.
Methodology: From Jan 2016 to date, multiple meetings were taken with hospital stakeholders including pharmacy, cardiology consultants and NCHDs, cardiology in- and out-patient nursing staff. Challenges with triple therapy planning and the communication of the plan were identified. A triple therapy template was piloted from June 2016 to support communication with the patient and health care professionals. The template was improved based on stake-holder feedback.
Results:
Challenges identified with triple therapy included:

- The evolving nature of practice guidelines and uncertainty whether reducing oral anticoagulant dose is a valid approach.
- Ensuring the time point for review of triple therapy to a single antiplatelet and anticoagulant is known by all and will be acted on.
- Ensuring reduced anticoagulant doses are appropriately upped again at review.

A triple therapy template was developed to share the agreed plan with all stakeholders and includes:

- Label 1 for the Medical Notes to convey the agreed plan to all in-hospital medical, nursing and pharmacy staff.
- Label 2 for the patient, which is attached to an anticoagulant alert card.
- Specific electronic prescribing (TEAMS) instructions so that the discharge letter and prescription clearly convey the plan to the GP and community pharmacist.

Conclusion: Collaboration between medical, nursing and pharmacy staff has been key in identifying the risks and enhancing medication safety in cardiovascular triple therapy patients.

Standardising Management of Inhaled Therapies for the Acute Management of Chronic Obstructive Pulmonary Disease (COPD)

Poster + Oral Presentation - Abstract ID: 79

Ms. Jennifer Brown [1], ***Ms. Mariosa Kieran*** [2], ***Ms. Sarah Molony*** [2], ***Dr. Katherine O Reilly*** [3], ***Dr. Brian McCullagh*** [3], ***Prof. Ciaran Meegan*** [2]

1. *Pharmacy Department, Mater Misericordiae University Hospital,* ***2.*** *Pharmacy Department, Mater Misericordiae University Hospital, Dublin,* ***3.*** *Department of Respiratory Medicine, Mater Misericordaie University Hospital*

Abstract

Introduction:
Acute exacerbation of COPD represents substantial proportion of MMUH admissions. Administration of bronchodilators is a key intervention for the management of such exacerbations.
Supply of inhaled therapies for COPD was recognised as a area of preventable waste. Recommendations for inhaler management on patient admission could minimise wastage and improve patient safety and outcomes by ensuring patients receive the correct inhaler, strength and device during admission.
The increased commercial availability of drugs and devices for COPD treatment also triggered a requirement to review formulary inhalers.
Hospital guidelines for the management of inhaled therapies for COPD were required to reflect national and international recommendations.
Aim / Objective:

- Eliminate unnecessary wastage regarding the supply of inhalers
- Standardise use of inhaled therapies to improve inhaler utilisation in the management of COPD acute exacerbations.
- Update the MMUH formulary inhaled drugs and devices

Methodology:

- Formulary inhalers were reviewed by all relevant stakeholders.
- Clinical guidelines were reviewed and applied into a protocol, cognisant of formulary therapies and Medicines Management Programme recommendations. This includes initial use of nebules with supply of inhalers delayed until respiratory review.
- MMUH Clinical staff were informed of the new COPD management protocol.
- Inhaler stocks in the ED and acute medical unit (AMU) were amended.
- Inhaler use in the ED and AMU was reviewed pre- and post-introduction of the protocol.

Results

- The formulary inhalers was reviewed to ensure inclusion of each inhaler class and minimise duplication.
- A clinical decision support protocol for inhaler utilisation in COPD was implemented.

- 6 months post-implementation, the number of inhalers issued to the ED and AMU has reduced by 21% and inhaler expenditure has reduced by 21% versus the previous 6 months.

Conclusion: Development of up-to-date clinical guidance accompanied with inhaler formulary review by the MDT has improved efficiencies regarding use of inhaler devices in the MMUH.

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Streamlining the Medicines Supply Chain – Think Big, Start Small

Poster - Abstract ID: 94

Dr. Orla Nolan [1], ***Ms. Elaine Conyard*** [1], ***Mr. Charles Dineen*** [2], ***Ms. Susan Duffy*** [1], ***Ms. Nikki Knight*** [3], ***Ms. Ciara Mctaggart*** [1], ***Ms. Kathleen Smith*** [1], ***Mr. Kieran Tangney*** [2], ***Ms. Fiona Thomson*** [1], ***Ms. Ciara Winters*** [3]

1. *Dept. Pharmacy, Our Lady of Lourdes Hospital, Drogheda,* ***2.*** *Royal College of Surgeons in Ireland,* ***3.*** *Dept. Nursing, Our Lady of Lourdes Hospital, Drogheda*

Abstract

Introduction:
Having the Right Amount of the Right Drug available at the Right Time is crucial to patient care. An integrated approach is vital to ensuring the seamless supply of medicines. A multidisciplinary team was established to review the medicine supply chain (prescription-to-administration). It was hoped that problems in this process if identified and amended, could improve delivery of care to the patient.
Objective:
To engage and enable nursing and pharmacy staff through discussion and training,thus empowering them to identify, and make, relevant process changes.
To reduce the time spent on supply of stock items, without impacting other services, thus releasing staff for patient care.
Methodology:

Teams of nursing and pharmacy staff were established on two wards.
The supply chain was defined and parameters measured and analysed (e.g.time taken, volume & timing of requisitions).
Improvements were suggested and trialled while monitoring continued.
Modifications were stopped when a number of PDSA cycles were completed and the desired impact of the changes achieved.
Monitoring was continued to ensure that the changes embedded and that benefits were maintained.
Results:

Three changes significantly impacted on the supply chain;

- Reviewing the stock list.
- Improving ward storage facilities.
- Simplifying ordering processes.

Comparing four weeks at the beginning and end of the study:

- Ordering of stock items between top-ups fell by ~47%.
- Out of hours ordering of stock items fell by ~57%.
- Nursing time spent on stock ordering fell by ~80min/ward/week.

- Pharmacy time spent on stock supply fell by ~50min/ward/week.

Conclusion:

A multidisciplinary approach allowed an established process to be redesigned with ease of compliance and patient centred care as a priority.
The results of this pilot study exceeded expectations and it is hoped to roll out the revised processes across the hospital in the coming year.

Streamlining the suitability and availability of antidotes for cyanide poisoning in children in Tallaght Hospital

Poster - Abstract ID: 105

Mr. Aidan Morris [1], ***Mrs. Carol O'Brady*** [1], ***Mrs. Niamh Kilcullen*** [1]

1. *Tallaght Hospital*

Abstract

Introduction:
An incident occurred during the night where there was the need to treat cyanide toxicity in a child. There was a lack of clarity regarding the choice, suitability, dosing and availability of the most appropriate treatment. The guidelines were ambiguous with regard to treatment of children.
Aim/Objective:
To ensure availability of preferred cyanide poisoning treatments for paediatric patients based on consultant preferences and to determine treatment guidelines.
Methodology:
Following a UK Medicines Information best practice search strategy a complete query was carried out. Reference sources included Tallaght Hospital guidelines[1], National Poisons Information Centre guidelines[2], Toxbase[3] and Royal College of Emergency Medicine.[4] Discussions were carried out with a pharmacist in OLCHC and Tallaght ED consultants.
Results/ Discussion:
The options available for the treatment of cyanide toxicity include Cyanokit® (hydroxocobalamin), dicobalt edetate, and sodium nitrite/sodium thiosulphate. Following discussion with consultants on the information compiled from enquiry sources, it was found that Cyanokit® is the most appropriate treatment for paediatric cyanide poisoning. A confounding factor is that Cyanokit® is difficult to source. At the time of writing, we are able to source it as an EMP. It is a costly product but on discussion the decision was made to stock in our Emergency Department as benefits outweighed cost implications.
Conclusion:
Cyanokit® is the preferred treatment for cyanide poisoning in paediatric patients. It is essential that we keep Cyanokit® in Tallaght Hospital to treat cyanide poisoning in paediatric patients in the event of an emergency. We have purchased this product and it is now kept in our antidote press. This has been communicated to all paediatric ED consultants and all pharmacy staff. The Tallaght Hospital Medicines Guide has been updated to reflect his change. This research has highlighted the need for an antidote borrowing agreement between hospitals.

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Taking Stock- Improving the stock take processes in Tallaght Hosptial

Poster - Abstract ID: 117

Mrs. Niamh Kilcullen [1], ***Mr. John O Byrne*** [2], ***Ms. Yvonne Sheehan*** [1], ***Ms. Patricia Dalton*** [2], ***Mrs. Louise Byrne*** [1], ***Ms. Deirdre Wheelan*** [2], ***Ms. Linda Maher*** [2]

1. *Tallaght Hospital,* ***2.*** *Tallaght Hospital, Dublin*

Abstract

Introduction:
The Pharmacy department in Tallaght Hospital conduct an annual stock take. Over the last ten years the process has been streamlined using 6 sigma methodologies (6 sigma is a disciplined, data driven approach and methodology for eliminating defects). The changes made have reduced the time taken and improved the outcomes of the stock take in the department.
Aim/Objective: To streamline the stock take procedures in order to ensure that the stock take is undertaken in a more efficient manner and that the outcomes of duration taken to complete, and a reduction in discrepancies are achieved.
Methodology: Using 6 sigma methodologies key stakeholders were invited to be part of the stock take management team. The team are responsible for coordinating the stock take preparation and running the stock take on the day. The team agreed that each person take on specific roles on the day of the stock take, and complete assigned preparatory work in advance of the day. Feedback is also sought from both the stock take management team, and the pharmacy department staff as to what worked well or not, in order to improve for next time.
Results/ Discussion:
The stock take takes 2 hours less to complete than it did 10 years ago, a 40% reduction in the time taken.
The number of items with discrepancies of more than €1,000 was reduced by 86% in the 2015 stock take compared to the 2005 figures.
Conclusion: The use of 6 sigma methodologies, and continuous process improvement has led to a more efficient process for the management of the Pharmacy department annual stock take.

References

None

Technician-led Medicines Reconciliation in an acute general hospital .

Poster - Abstract ID: 128

Ms. Eimear Heslin [1], ***Mr. Derry O loan*** [1], ***Mr. James Carr*** [2]

1. *Connolly Hospital Blanchardstown,* ***2.*** *Connolly Hospital, Blanchardstown*

Abstract

Introduction;
In CHB, a limited clinical pharmacy service is available. Where provided, medicines reconciliation is conducted as part of this service across the admission interface. In 2016, a pharmaceutical technician, piloted a technician-led medicines reconciliation service for frail elderly patients admitted through the Emergency Dept (ED) in conjunction with the part-time clinical pharmacist in the area.

Aim/Objective
This study aims to assess effectiveness & improve efficiencies in the medicines reconciliation service by integrating a pharmaceutical technician into the process.

Methodology;
The pharmaceutical technician was allocated protected time (up to 2hrs) once weekly. Responsibilities of the technician included; identifying frail elderly patients for medicines reconciliation (>75yrs, ≥5 medications), obtaining gold standard pre-admission medication list, recording medications prescribed by the hospital, and then reconciling the medications across the interface. For each patient, the technician recorded drug omissions, recent short-term courses, dose changes, frequency changes, formulation changes, date of most recent dispensing and any concerns they may have. These were communicated to the clinical pharmacist in the area to follow-up +/- intervene as appropriate.

Results;
In the period May 2016 to November 2016, a total of 37 frail elderly patients have had their medications reconciled by the pharmaceutical technician over 14 sessions, (average 2.64 per session). A total of 162 interventions have been required based on medicines reconciliation information provided by the technician (average 4.4/patient). Types of intervention included regular drug omissions (63.6%), PRN drug omissions (21.6%), dose changes (7.4%) and frequency changes (3.7%).

Conclusion;
The successful pilot of a technician-led medication reconciliation service highlights the potential role of a pharmaceutical technician in this area. Whilst enhancing patient safety with timely medication reconciliation, it has also had a positive impact on the workflow of the clinical pharmacist with an increase in time available for other duties. Plans to expand the service are underway

The Effect of a Prescriber Training Intervention on the Prevalence of Prescribing Errors Found in an Electronic Prescribing System

Poster + Oral Presentation - Abstract ID: 56

Ms. Fionnuala Nevin [1], ***Ms. Gail Melanophy*** [1], ***Ms. Aisling Collins*** [1], ***Ms. Miriam Moriarty*** [1], ***Dr. Grainne Courtney*** [1], ***Dr. Tamasine Grimes*** [2], ***Ms. Gaye Stephens*** [2]

1. *St. James's Hospital, Dublin,* ***2.*** *Trinity College Dublin*

Abstract

Introduction

Electronic prescribing systems are being increasingly implemented in healthcare settings internationally.[1] The available literature strongly advocates the importance of training for users of electronic prescribing systems to ensure their safe and effective use.[2,3] However, there is a lack of evidence to demonstrate the effect that ongoing training has on the use and impact of these systems.

Aims

In order to strengthen the case for staff training resources for electronic prescribing systems, this study was carried out to investigate the effect of a training intervention on the prevalence of prescribing errors found in an outpatient electronic prescribing system currently in use.

Methods

Audit and feedback methods were used. Prescription audits were carried out before and after the delivery of a classroom-based training intervention. The audits were used to measure and analyse the effect of the intervention on prescribing errors found in the electronic prescribing system. A questionnaire and clinician observations were carried out with prescribers. The pre-intervention audit results, questionnaire, and clinician observations were used to inform the prescriber training intervention.

Results

The prevalence of prescribing errors was significantly reduced, following the delivery of the training intervention. Statistically significantly more medications prescribed during the pre-intervention audit contained one or more errors when compared with the post-intervention audit (28.6% versus 9.2%, $p < 0.05$). Most errors found were deemed to be system-related errors.

Conclusion

The study demonstrates the positive impact that ongoing training can have on users' interactions with an electronic prescribing system. The study stands to inform those managing electronic prescribing projects that, despite initial training, errors can still occur in the system and must be addressed. This study supports the need to provide adequate training resources for users of electronic prescribing systems, and to plan for training interventions to be delivered as part of ongoing system maintenance.

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The impact of a pharmacist review at discharge upon medication discrepancies from a psychiatric inpatient unit – a prospective cohort study

Poster - Abstract ID: 110

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Abstract

Introduction

Inadequate explanations about medications at discharge can lead to omission of medications, incorrect dosage, anxiety and confusion for patients[1]. Patients with mental health conditions face barriers to care[2] and hence are vulnerable to medication problems upon discharge[3].

Aim/Objective

To quantify and classify medication discrepancies at discharge, determine the clinical significance of these discrepancies and estimate the cost effectiveness of the interventions.

Methodology

This prospective cohort study comprised of clinical pharmacist discharge medicines reconciliation following ethics approval. Medications that were not reconciled were identified, categorised and resolved. Clinical significance of discrepancies was determined using a validated scale to assess the potential for patient harm[4]. The cost of this service was calculated using the cost of the pharmacist's time and the cost of the probable harm[5]. Descriptive statistics explained the demographics whilst bivariate analysis, including Pearson's Correlation, was conducted to determine any statistically significant associations between parameters leading to discrepancies ($p < 0.05$).

Results

The majority (87.5%) of participants (n=48; 71% female; mean age: 56 years (SD=12.3))had at least one medication discrepancy at discharge, with incorrect dose the most common discrepancy. There was a statistically significant positive association between the number of discrepancies and the number of medicines prescribed on admission ($R = 0.419$, $p=0.003$), on discharge ($R = 0.456$, $p=0.001$), and non-psychiatric medications prescribed upon discharge ($R = 0.433$, $p=0.002$). 80% of the discrepancies found were deemed potentially of moderate to severe clinical significance. A cost:benefit ration of €1:€76.33 was found.

Conclusion

This study highlights the need for structured discharge medicines reconciliation and adds to the positive evidence for the development of a role for clinical pharmacists to reduce and prevent medication discrepancies and hence improve patient safety at discharge.

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The Impact Of Electronic Prescribing And Standard Concentration Infusions Facilitated By Smart-Pump Technology On Medication Errors In A Paediatric Intensive Care Unit

Poster - Abstract ID: 104

Ms. Moninne Howlett [1], ***Dr. Cormac Breatnach*** [2], ***Prof. Brian Cleary*** [3]

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Abstract

Introduction:
Increased use of health information technology (HIT) has been advocated as a medication error reduction strategy. Evidence on its benefits in the paediatric setting remains limited. In 2012, the paediatric intensive care unit (PICU) in Our Lady's Children's Hospital, Crumlin implemented both electronic-prescribing and a smart-pump library of standard concentration infusions (SCIs).

Aims:
This study aims to assess the impact of the new technology on PICU medication errors.

Methods:
A retrospective, observational study based on an interrupted time series design was conducted in a 23-bed PICU of a tertiary children's hospital. 3,400 medication orders were reviewed over 4 time periods: pre-implementation (Epoch 1); post-implementation of SCIs (Epoch 2); immediate post-implementation of electronic-prescribing (Epoch 3); and 1 year post-implementation (Epoch 4). Using pre-determined definitions, medication error rates were calculated as no. of errors per orders screened by clinical pharmacist review. A multi-disciplinary consensus process was utilised. Novel error types were identified. Errors were graded for severity using a combination of two validated grading tools. Data were analysed in Stata Version 13.1 using ANOVA and Chi-squared tests.

Results:
Overall medication error rates were similar in Epoch 1 and 4 (10.2% v 9.8%; $p>0.05$). Altered error distribution was evident. Incomplete and wrong unit errors were eradicated; duplicate orders increased. Dosing errors remained most common. 27% of post-implementation errors were novel technology-generated errors. The implementation of SCIs pre electronic-prescribing significantly reduced infusion-related prescribing errors (29.0% to 14.6%; $p<0.01$). A further reduction to 8.4% ($p>0.05$) was reported after implementation of electronically-generated infusion orders.

Conclusion:
Introduction of SCIs and smart-pump technology significantly reduced errors associated with the prescribing of infusions in PICU. The impact of electronic prescribing on overall medication error rates was considerably lower. Novel errors were common, highlighting the need for further studies with increasing use of HIT in paediatric settings.

The PIL Study - Pyrexia in Labour or within four hours of delivery: risk factors, diagnostic criteria and infection outcomes

Poster - Abstract ID: 14

Mr. David Fitzgerald [1], ***Dr. Susan Knowles*** [1], ***Dr. Paul Downey*** [1], ***Dr. Mike Robson*** [1], ***Dr. Ingrid Browne*** [1]

1. *National Maternity Hospital, Holles Street, Dublin 2*

Abstract

Introduction

Women in labour may develop pyrexia due to infections such as chorioamnionitis (1), presence of an epidural for pain relief (2), direct physiological effects of labour (3), or other non-infectious aetiologies (4). Improved diagnostic criteria are needed to differentiate between infectious and non-infectious causes of peripartum pyrexia, defined as pyrexia in labour or within four hours of delivery, in order to rationalise antimicrobial prescribing. In addition, the obstetric systemic inflammatory response syndrome (SIRS) criteria are in need of validation as markers of peripartum infection (5).

Aim/Objectives

To determine the aetiology and clinical characteristics of peripartum maternal pyrexia by investigating (a) various risk factors for peripartum pyrexia (b) the rate of infection following peripartum pyrexia (c) the diagnostic accuracy of obstetric SIRS criteria.

Methodology

A case-control study that consisted of 175 women with peripartum pyrexia (≥38C) and 175 apyrexial controls was undertaken. Odds ratios for associations between peripartum pyrexia and risk factors were calculated using McNemar test. Adjusted odds ratios were obtained using conditional logistic regression.
Clinical, microbiological, and placental histology data were used to determine the rate of infection in the pyrexia group. Diagnostic accuracy of obstetric SIRS criteria for identification of infection among the pyrexia group was determined using receiver operating characteristic (ROC) curves.

Results

Peripartum pyrexia was associated with epidural analgesia (adjusted odds ratio 10.67; 95% CI 1.54 – 73.83) and nulliparity (adjusted odds ratio 6.47; 95% CI 2.08 – 20.14). Among the pyrexia group the rate of infection was 17.1%. A further 14.3% of cases had microbiological colonisation at a non-sterile site. There was no evidence of infection/colonisation in 68.6% of cases. The obstetric SIRS criteria were poor predictors of infection among the pyrexia group (see table).
Conclusion

Peripartum pyrexia is primarily of non-infectious origin. Early antibiotic de-escalation may be appropriate for this treatment indication.

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Area under the ROC Curve

Peripartum Pyrexia Related Maternal Observation	AUC	Statistical Significance	95% Confidence Interval
Heart Rate	0.542	*P* = 0.48	0.43 to 0.65
Respiratory Rate	0.515	*P* = 0.81	0.40 to 0.63
Systolic Blood Pressure	0.399	*P* = 0.09	0.29 to 0.51
White Cell Count	0.505	*P* = 0.93	0.39 to 0.62

Null hypothesis: true area = 0.5

Table 1. receiver operator characteristic roc curve analysis.png

The titration process in heart failure: Are we achieving optimal doses and what are the associated costs?

Poster - Abstract ID: 53

Ms. Sadhbh O Leary [1], ***Ms. Michelle Griffin*** [1], ***Prof. Jim O Neill*** [1], ***Dr. Margaret Bermingham*** [2]

1. *Connolly Hospital, Blanchardstown,* ***2.*** *University College Cork*

Abstract

Introduction

Guidelines recommend that patients with heart failure with reduced ejection fraction (HF-REF) should be initiated on an angiotensin-converting enzyme inhibitor (ACEi) or an angiotensin II receptor blocker (ARB) and a beta-blocker at low doses and be up-titrated to target doses shown to be beneficial in clinical trials. They do not give recommendations regarding the optimum treatment of patients with HF with preserved ejection fraction (HF-PEF).[1]

Aims

1. To determine the proportion of patients titrated to target doses in a nurse-led, consultant supervised, outpatient HF clinic.
2. To determine the treatments prescribed to HF-PEF patients.
3. To establish the reason for failure to titrate to target doses.
4. To examine titration cost.

Methods

This was a retrospective cohort study of patients newly diagnosed with HF who first attended a HF clinic for medication optimisation between January 2014 and June 2015. The medical records of 51 eligible patients (42 HF-REF and 9 HF-PEF) were accessed and data collected from each clinic visit.

Results

33.3% of HF-REF patients were titrated to target ACEi/ARB dose, 9.5% to target beta-blocker dose and 4.8% to the target dose of both.

77.8% of HF-PEF patients were prescribed an ACEi/ARB and 66.7% were prescribed a beta-blocker.

92.2% of all patients experienced an adverse effect during titration, the most common being a reduction in blood pressure, heart rate or renal function, or a rise in potassium. No patient experienced adverse changes to pulmonary function.

The average financial cost associated with medication optimisation of a patient with HF-REF was €719 and HF-PEF was €598.

Conclusion

The target doses of ACEi/ARBs and beta-blockers are difficult to achieve in many HF-REF patients and adverse effects are the main burden preventing titration. In the absence of guidelines, patients with HF-PEF are treated in a similar manner to those with HF-REF and experience similar adverse effects.

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Title: Gram-negative resistance at South Tipperary General Hospital (STGH): investigation of increased rates and preservation of effective treatment.

Poster - Abstract ID: 98

Ms. Suzanne Phelan [1]

1. *University College Cork/School of Pharmacy*

Abstract

Authors: Phelan Suzanne, Cronin Ciara, Hickey Mary, Barbosa Teresa M.
Establishments: STGH Pharmacy Department, University College Cork (UCC).

Introduction: A retrospective case series was undertaken to investigate a significant increase in the proportion of invasive isolates identifying multi-drug-resistant (MDR) Gram-negative bacteria (GNB), taken on admission to STGHin 2014. These isolates were resistant to first line agents for sepsis and sensitive only to meropenem. Ineffective initial antimicrobial therapy for invasive infections caused by resistant GNB is linked to an increased risk of mortality. [1-4]

Aim: To investigate the prevalence of known risk factors for resistance in GNB in patients with the isolates of interest. To assess the current level of meropenem use and its appropriateness.

Methodology: Patients were identified by the Surveillance Scientist at University Hospital Waterford (UHW). Medical charts, Inpatient-Management System records and laboratory results were interrogated for relevant data. Patients prescribed meropenem during the data collection period were identified from the Restricted/Reserve log form and stewardship rounds on the Intensive Care Unit. All data was analysed using Microsoft Excel®.

Results: A number of known risk factors were prevalent among the 12 case-series patients identified, including previous antimicrobial exposure, recent hospitalisation, high burden of co-morbidities, residence in long-term care (LTC) and advancing age. The use of meropenem had increased significantly when compared to an audit completed in 2015, while compliance with Restricted/Reserve Antimicrobial policies around its use had fallen.

Conclusion: Case series patients reflected a high prevalence of a number of easily identifiable risk factors noted from the literature which could potentially be used risk stratify patients for alternative empiric antimicrobial treatment. A number of areas for education and improvement regarding the prudent use of meropenem at STGH were identified.

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To Evaluate the Optimal Place of Gravimetric Manufacturing of Chemotherapy in the Mater Misericordiae University Hospital Aseptic Compounding Unit.

Poster - Abstract ID: 90

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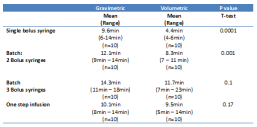
Abstract

Introduction:
The MMUH employs a “double check” system for chemotherapy manufacture. Using traditional volumetric manufacture the technician draws up the dose (check 1) and pharmacist visually checks this via CCTV (check 2).
Gravimetric manufacture is a new technique using CATO® software integrated with electronic balances in the isolators. Technician draws up the dose completing check 1. Check 2 is electronically completed by CATO® using drug density with pre and post manipulation weights of: syringe(s), infusion bag and vial(s).
Aim:
To evaluate the time impact of gravimetric manufacture on different dosage forms and identify its optimal place within MMUH procedures and workflow.
Methods:

- Design and pilot a data collection tool recording manufacture time from tray preparation, including sterilization, gowning, production time, CATO data entry*, worksheet/label generation*, troubleshooting* and ending when the product exits the isolator. Exclusion: pharmacist time to check and generate worksheets/labels for volumetric.
- Measure volumetric and gravimetric manufacture time for bolus syringes, batch bolus syringes and infusion solutions.
- Compare results.

*Gravimetric only
Results:
There was no statistical difference between volumetric and gravimetric compounding of one step infusions (P=0.17) or batch of 3 syringes (P=0.1)
(Table 1)
Gravimetric bolus manufacture was slower for single syringes (P=0.0001) taking approximately twice as long and slower for batch of 2 syringes (P=0.001). Bolus gravimetric manufacture has ceased based on this data and the availability of a visual check at the final point of product release.
Unmeasured benefits of reduced pharmacist interruptions and independent technician work make this method worthwhile.
Conclusion:
Gravimetric manufacture of one step infusions is routinely employed in the MMUH pharmacy department allowing greater flexibility of workflow for pharmacists and technicians. Gravimetric manufacture was substantially slower than volumetric manufacture for bolus syringes and is no longer in use.



	Gravimetric Mean (Range)	Volumetric Mean (Range)	P value T-test
Single bolus syringe	5.6min (5-14min) (n=10)	4.4min (4-6min) (n=10)	0.0001
Batch: 2 Bolus syringes	11.1min (9min – 14min) (n=10)	8.3min (7 – 11 min) (n=10)	0.001
Batch 3 Bolus syringes	14.3min (11min – 18min) (n=10)	11.7min (7min – 23min) (n=10)	0.1
One step infusion	10.1min (8min – 14min) (n=10)	9.5min (5min – 14min) (n=10)	0.17

Table 1. comparison of gravimetric and volumetric manufacture times.png

Treatment of Peritonitis: A multidisciplinary team approach to implementing a practice change

Poster - Abstract ID: 99

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1. *Tallaght Hospital, Dublin,* ***2.*** *Tallaght Hospital,* ***3.*** *Ta*

Abstract

Introduction

Peritonitis is a leading complication of Peritoneal Dialysis (PD). Severe or prolonged peritonitis leads to structural and functional alterations of the peritoneal membrane, eventually leading to membrane failure. Peritonitis is a major cause of PD technique failure and conversion to haemodialysis.

The International Society of Peritoneal Dialysis (ISPD) guidelines recommend that every programme should monitor, at least annually, the incidence of peritonitis. A team approach to continuous quality improvement is key to a successful PD programme.

Aims

Review the evidence base for the treatment of peritonitis in a multidisciplinary team (MDT) based setting (nephrology/pharmacy/nursing/microbiology).

Gain collaborative input from members of the MDT, ensuring a comprehensive review process, enabling practice change, and optimisation of patient care by updating our existing treatment guideline.

Methods

The current procedure for the management of peritonitis was reviewed and updated in line with the ISPD 2010 Guidelines and ongoing audit data from the unit. The changes were discussed and agreed in an MDT setting. The finalised guideline was submitted to the hospital's Drugs & Therapeutics Committee for approval. Once approved, the guideline was disseminated internally for implementation.

Results

New treatment algorithms were developed for intraperitoneal Vancomycin and Gentamicin administration as part of the guideline update.

Post implementation, minor amendments to the antibiotic treatment algorithms were made based on feedback from the nursing staff as end-users.

Conclusion

The guideline updated aspects such as length of treatment and antibiotic dialysate compatabilities and included implementation and evaluation strategies as well as guidance for audit.

Development of this guideline allowed an MDT approach to be applied to a working guideline aimed at optimising the management of PD patients presenting with peritonitis. It is planned to continue to review the document using ISPD updates and audit date from the unit to optimise the delivery of patient care.

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Updating the Capacity Plan for the Aseptic Unit (AU) in Tallaght Hospital

Poster - Abstract ID: 13

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1. *Tallaght Hospital*

Abstract

Introduction

H-PICs and NCCP guidelines recommend that in order to manage workload in a pharmacy AU, the preparation establishment must have a capacity plan. This should consider volume, complexity of work, time available and the staff and facilities required. Recent capacity restrictions, in commercial compounding units, have highlighted the need for accurate capacity plans in the hospital setting. A retrospective capacity plan based on a formula developed in the UK has been in place in Tallaght since 2003. Over the last 2 years it has been updated to consider all local AU activities.

Aim

To update the existing capacity plan calculator to accurately measure the staffing and facilities required in the AU in Tallaght Hospital.

To present the findings to management and seek the resources required.

Method

Time taken to complete the following were measured:

- Steps in the compounding process and other essential activities
- Training staff and maintaining a quality management system (QMS)
- Usage of the isolators

The formula was updated and an SOP was prepared.

Results

The average time to process a product from confirmation to release is 45 minutes. Technicians spend 300 minutes per day gowning, cleaning, completing daily QC and other non -compounding related duties.

Training time varies. 20-30% of resources should be allocated to ancillary tasks such as QMS. The chemotherapy isolator runs at 40-90% capacity but queues occur at peak times.

Using the above figures the updated capacity plan calculates an average monthly staffing deficit of 0.8 pharmacist and 1.5 technicians for 2016. A business case for increased staffing awaits approval from management.

Conclusion

The capacity plan calculator gives a more accurate indication of staffing needs. A business case has been presented to management. An SOP is available to support the calculator. An accurate capacity plan is essential to allow the safe management of workload.

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Using Quality Improvement Methodology to Implement a Pharmacist-Led Medicines Reconciliation Service

Poster - Abstract ID: 63

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Abstract

Introduction:
Improving the quality and safety of health care services remain a priority reflected in the strategy and reforms of the Irish Government[1]. The purpose of a quality improvement project is to implement evidence based standards to improve outcomes in clinical care or processes which are measurable and sustained over time[2]. Provision of medicines reconciliation (MR) is an international healthcare priority. MR is one of the World Health Organisation's (WHO) High 5s patient safety priorities[3]. This is reflected nationally through MR inclusion in Department of Health and Children, HIQA, HSE and Clinical Care Programme guidelines.[4, 5, 6, 7]. Pharmacists are the preferred profession internationally for undertaking MR[8], however, it is recognised that this is a resource intensive activity.

Aim / Objective:
To utilise quality improvement methodologies to implement and measure a pharmacist-led MR service.

Methodology:

- Drugs and Therapeutics Committee assessment of the strategic MR requirements.
- Business case and service scoping document evaluation by the hospital Chief Executive Officer (CEO)
- Stakeholder engagement pre-implementation.
- Key Performance Indicators for measurement, comparison and review were agreed to ensure evaluation of the MR service performance.

Results
CEO approval was obtained for phased implementation a pharmacist-led MR service.
Internationally recognised WHO measures, sampling criteria and targets have been selected to quantify MR service capacity and quality[3].

Conclusion:
Improving the quality and safety of services is a healthcare priority reflected in the strategy and reforms in the MMUH. A quality improvement MR project was proposed. Phase one of a resourced pharmacist-led MR service was implemented in 2016. Service quality and expansion requirements will be assessed using internationally recognised measures. The measurements enable on-going review of the performance of the MR service. The evidence-based methodology supports MR as a mechanism to improve medication and patient safety.

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Waiting for the electronic revolution: improving the paper system for prescribing and administration of medication in an acute hospital

Poster - Abstract ID: 22

Ms. Marie Philbin [1], ***Mr. Oisin Ohalmhain*** [1], ***Mr. Brendan Reddy*** [1], ***Ms. Denise Doolan*** [1], ***Ms. Claire Foley*** [1], ***Dr. Sarah Barry*** [1], ***Dr. Jimmy Lee*** [1], ***Ms. Joan Peppard*** [1]

1. *Midland Regional Hospital Tullamore*

Abstract

Introduction

The Health Service Executive initiated a project to develop a national MPAR in 2012. This project made considerable advances and piloted the draft national MPAR on two occasions in various pilot sites in 2013. The MPAR in use in MRHT was in existence for 14 years, it was struggling to manage the complexity, volumes and rate of change of medication prescribing.

Aims

On suspension of the national project in late 2014 it was necessary for MRHT to overhaul the existing MPAR.

Methods

In 2015 a copy of the draft national MPAR was obtained to form the basis for the new MPAR. The project team with representation from Pharmacy, Nursing and Quality & Patient Safety reviewed the document and minor changes were made. All teams and wards were advised on the 40 page MPAR with widespread circulation of the pilot MPAR and presentations at ward and departmental level. Evaluation forms were widely circulated at this stage. Multiple comments were received within 72 hours of the project initiation, with a significant proportion from NCHDs. Consequently, the project team was revised to include the Lead SHO to inform the team on challenges presented to prescribers, particularly, doctors.

Results

The MPAR review involved the use of 2 versions before the final version was agreed upon. Version 3 became the finalised “Standard” version. This MPAR has a duration of 19 days and 28 regular medication prescriptions in addition to the designated sections for high-risk medications such as antimicrobials, oral anticoagulants and supplemental insulin. On acceptance of the “Standard” MPAR for routine use the project team revised & standardised three other MPARs in use in the hospital for day cases, short stay and ICU use.

Conclusion

The MPARs in MRHT are now well integrated & well accepted by all involved in the medication management process.

Who are we? People with Intellectual Disabilities. What do we need? Specialist Pharmacists.

Poster - Abstract ID: 36

Dr. Bernadette Flood [1]

1. *Daughters of Charity Disability Support Services*

Abstract

Introduction

The recognition of specialisation both from professional accreditation and within the workplace is increasingly becoming a feature of international pharmacy practice. To contribute to improving the health of people and populations, specialist pharmacists must be embedded in health infrastructure.

The population with intellectual disabilities (ID) are thought to be one of the most medicated groups in society. The Health Information and Quality Authority has noted that medication issues are a cause for concern in services that care for people with intellectual disabilities (PWID) .

Aim

The aim of this project was to discover how informed PWID are about their medication and to identify key factors relating to their experiences and understanding of medication use (1).

Methods

This project was facilitated by National Support organisation for PWID . It received approval from the TCD Health Sciences Research Ethics Committee. Six PWID who consented for themselves, were interviewed by a pharmacist using a semi structured tool. Grounded theory analysis of results (1).

Results

The main inductive theory: PWID may be 'unseen' and 'unheard' in the medication use process and this vulnerability will require the expertise of a 'specialist pharmacist' to ensure their safety.

Conclusion

Specialist ID Pharmacists will provide the following roles: (a) *Clinical* e.g. provide specialist pharmaceutical care for PWID and clinical medicines management support (b) *Liaison*, e.g. collaborate with specialist health and social care to contribute to the co-ordination, oversight and auditing of health care issues particular to ID, e.g. uptake of health checks, psychotropic drug use (c) *Educational* in partnership with others e.g. specialist ID professionals, (d) *Leadership* e.g. provide support to GPs & health care professionals e.g. community pharmacists.

Acknowledgement: Dr Martin C. Henman MPSI , TCD, PhD Project Supervisor

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"LEAN it and mean it" - Impact of new staff on a pharmacy department

Poster - Abstract ID: 116

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1. *Phoenix Pharmacy Department, c/o St Mary's Hospital, Phoenix Park, Dublin 20*

Abstract

Introduction

Phoenix Pharmacy Department (PPD) is located on the grounds of St Mary's Hospital. Historically this was a dispensary led hospital service, however with the addition of new staff an opportunity arose to modernise and expand the clinical services provided. To facilitate this expansion a number of LEAN principles were applied to the dispensing process to make it more efficient.

Aim/Objective

- Carry out a "Value Stream Analysis[1]" on the dispensary process.
- Create flow and eliminate waste: using the 5 whys[1]?

Methodology

- Value stream analysis was used to identify all activities occurring along the value stream.
- A process map was put on a white board to visualise the dispensary layout. "Point of use[1]" was implemented to ensure supplies are within arm's reach and positioned in sequence to prevent extra lifting and unnecessary walking within the dispensary.

- Storeroom converted to an office, creating a quiet space for clinical work.
- New 'Responsible Pharmacist' and 'Responsible Technician' roles created to enable a 'dispensary cover' rota, freeing up pharmacist time for clinical work
- Stock management systems changed using Excel to create pivot tables enabling fast review of stock lists/quantities.
- Regular staff meetings commenced to provide a forum for group discussion.

Results

Dispensary processes streamlined through new layout and rotas. The dispensary-based efficiencies have allowed other projects to be undertaken, as well as creating a refreshed and dynamic workplace for all pharmacy staff.

Conclusion

Using LEAN principles has eliminated waste in terms of space, time, and effort. It has facilitated the expansion of services in the department namely the clinical service.

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Authors Index